

CITY OF MANKATO

Storm Water Pollution Prevention Program

**As required by the Minnesota Pollution Control Agency's
General Permit No. MNR040000: Authorization to Discharge
Storm Water Associated with Municipal Separate Storm
Sewer Systems under the National Pollutant Discharge
Elimination System/ State Disposal System Permit Program**

September 27, 2007
Mankato, Minnesota

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BACKGROUND – Lower Minnesota River Dissolved Oxygen TMDL

TMDL Implementation Checklist for Mankato's MS4 SWPPP

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APPENDIX

MPCA General Permit No. MNR040000

STORM WATER POLLUTION PREVENTION PROGRAM

BACKGROUND

In response to requirements set forth in the Clean Water Act, the Environmental Protection Agency (EPA) established regulations requiring public owners or operators of small “Municipal Separate Storm Sewer Systems” (MS4s) to obtain permit coverage in order to legally discharge storm water from their storm drain* systems. In Minnesota, the oversight of this permit program has been delegated from the EPA to the Minnesota Pollution Control Agency (MPCA). This Storm Water Pollution Prevention Program (SWPPP) was developed in response to the requirements necessary to secure permit coverage.

A SWPPP must include Best Management Practices (BMPs) designed to reduce the amount of pollutants discharging from the storm drain system to the Maximum Extent Practicable (MEP). The BMPs are defined on BMP Sheets and address the following Minimum Control Measures (MCMs):

- MCM 1: Public Education and Outreach on Storm Water Impacts
- MCM 2: Public Participation and Involvement
- MCM 3: Illicit Discharge Detection and Elimination
- MCM 4: Construction Site Stormwater Runoff Control
- MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment
- MCM 6: Pollution Prevention and Good Housekeeping for Municipal Operations

In addition to the MCMs, MS4s are required to define additional BMPs if certain environmental conditions exist. Specifically, the City of Mankato is required to meet the requirements of the Implementation Plan for the Lower Minnesota River Dissolved Oxygen Total Maximum Daily Load (TMDL) study. The goal of any TMDL is to restore waters to conditions that meet water quality standards. Currently, during periods of low flow, there is not enough dissolved oxygen in the Lower Minnesota River to support the life that normally exists there. The main cause has been determined to be excess phosphorus. Reducing the levels of phosphorus reaching the river during periods of low flow should increase the dissolved oxygen and ultimately put less stress on river life.

As required by the permit, the City agrees to implement the BMPs defined in this SWPPP and submit annual progress reports to the MPCA by June 30th of each year. The City must keep all records associated with this program for three years beyond the expiration of the permit. Records must be made available for public viewing. To view records, submit your request to the MS4 coordinator at stormwater@city.mankato.mn.us or call (507) 387-8643.

*To avoid confusion with the sanitary sewer system, this report will refer to the storm sewer system as the storm drain system whenever possible. Some of the required BMP titles cannot be changed and will use the word sewer. Mankato's storm drain system is completely separate from the sanitary sewer system and should not be confused.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1a-1 (Permit Section V.G.1.a)

BMP Title: <u>DISTRIBUTE EDUCATIONAL MATERIALS</u>																															
Audience(s) Involved: The following groups will be considered for this educational component: <ul style="list-style-type: none"> City staff that work with construction sites including, but not limited to: engineering field staff, utility workers, building inspectors, and parks employees. Businesses that disturb soil including, but not limited to: contractors, developers, utility companies, home builders, and landscapers. General Public. 																															
BMP Description: The City will attempt to reach the above-referenced groups through the following activities: <ul style="list-style-type: none"> Materials will be sent through targeted mailings to soil-disturbing businesses at the beginning of the construction season (regarding best management practices) and at the end of the construction season (regarding winter stabilization methods.) These materials will also be distributed to the city staff members that work with construction sites. Information will be sent through the utility bills twice per year educating the general public on varying aspects of storm water pollution prevention. The City will develop a web page that provides information regarding storm water pollution prevention. 																															
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.																															
Measurable Goals: The City of Mankato will measure and show effectiveness by: <ul style="list-style-type: none"> On-time completion of tasks in the implementation schedule. The City of Mankato will be able to quantify the work done on this BMP by: <ul style="list-style-type: none"> # of times the utility bills included pollution prevention information and # of recipients of each mailing. # of targeted mailings and # of recipients of each mailing. # of hits on the web page. 																															
Timeline/Implementation Schedule: Baseline – The City has from time to time provided educational material to its citizens regarding storm water pollution prevention. 2007 – Start semi-annual distribution of education materials through utility bills and targeted mailings. 2007 – Develop web page. 2007 – 2011 Annually evaluate effectiveness of the educational efforts associated with this BMP and amend if necessary.	<div style="border: 1px solid black; padding: 5px;"> <u>Recordkeeping & Reporting:</u> # of Utility Billings (UB) # of Recipients of UB (RUB) # of Targeted Mailings (TM) # of Recipients of TM (RTM) # of Web Page Hits (WPH) </div>																														
Specific Components and Notes: Consider teaming up with MS4s in the area to produce materials Topics to be considered include: best management practices, winter stabilization, illicit discharges, etc.	<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Year</th> <th style="text-align: left; border-bottom: 1px solid black;">UB</th> <th style="text-align: left; border-bottom: 1px solid black;">RUB</th> <th style="text-align: left; border-bottom: 1px solid black;">TM</th> <th style="text-align: left; border-bottom: 1px solid black;">RTM</th> <th style="text-align: left; border-bottom: 1px solid black;">WPH</th> </tr> <tr> <td>2008:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2009:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2010:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2011:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Year	UB	RUB	TM	RTM	WPH	2008:						2009:						2010:						2011:					
Year	UB	RUB	TM	RTM	WPH																										
2008:																															
2009:																															
2010:																															
2011:																															
Responsible Party for this BMP: <div style="margin-left: 20px;"> Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us </div>																															

Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009;
2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1b-1 (Permit Section V.G.1.b)

BMP Title: **IMPLEMENT AN EDUCATION PROGRAM**

BMP Description:

The education program for the City of Mankato is addressed in various BMP Sheets. The MS4 Coordinator listed below will oversee the implementation of the following program components:

- 1a-1 Distribute Educational Materials
- 1c-1 Education Program: Public Education and Outreach
- 1c-2 Education Program: Public Participation
- 1c-3 Education Program: Illicit Discharge Detection and Elimination
- 1c-4 Education Program: Construction Site Runoff Control
- 1c-5 Education Program: Post-Construction Storm Water Management in New Development and Redevelopment
- 1c-6 Education Program: Pollution Prevention / Good Housekeeping for Municipal Operations
- 1e-1 Annual Public Meeting
- P3-3 Develop TMDL Communication Plan

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

See the BMP Sheets listed above for measurable goals.

Timeline/Implementation Schedule:

Baseline: The City currently does not have a formal education program for storm water pollution prevention.
2007 – 2011: See the BMP Sheets listed above for the timelines associated with each educational component.

Specific Components and Notes:

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

See BMP Sheets listed above.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1c-1 (Permit Section V.G.1.b,c)

BMP Title: **EDUCATION PROGRAM: PUBLIC EDUCATION & OUTREACH**

Audience(s) Involved:

General Public

Educational Goals for Each Audience:

The City is required to distribute educational materials to the community or conduct equivalent outreach activities in an effort to educate citizens regarding the impacts of storm water discharges on water bodies and the steps that they can take to reduce pollutants in storm water runoff. The City plans to make new materials available annually through a variety of means such as utility bill inserts (BMP 1a-1), door hangers (BMP 1c-3), meetings (BMP 1e-1), web pages (BMP 1a-1), etc.

The City's goal for its citizens is to increase awareness about the impacts pollutants that enter the storm drain system through runoff have on our water bodies. The City would also like to educate citizens about actions that can be taken to lessen the impacts that pollutants have on our natural resources.

Activities Used to Reach Educational Goals:

The City will distribute educational materials as discussed in BMP 1a-1, 1c-3, and 1e-1.

The MS4 coordinator is available for a limited number of speaking engagements with schools, service organizations, and the like as requested by these groups.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Activity Implementation Plan:

Baseline – The City has from time to time distributed information regarding storm water pollution prevention.

2007 – 2011 Distribute educational materials as defined in BMP 1a-1.

2007 – 2011 Annually evaluate the educational efforts of the storm water pollution prevention program and amend if necessary.

Performance Measures:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of speaking engagements and the # of attendees (if any).
- # of efforts made to educate the public annually.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of Speaking Engagements
(SE)

of People in Attendance (PA)

of Education Efforts (EE)

Year	SE	PA	EE
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2008:

2009:

2010:

2011:

Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1c-2 (Permit Section V.G.1.b,c)

BMP Title: EDUCATION PROGRAM: PUBLIC PARTICIPATION	
Audience(s) Involved: General Public	
Educational Goals for Each Audience: The general public should understand that the City has implemented a storm water pollution prevention program and know that they can take an active role in sculpting the program as it evolves over the years.	
Activities Used to Reach Educational Goals: Citizens will be encouraged to participate in the following activities: <ul style="list-style-type: none">• Reporting erosion and sediment control problems to the storm water hotline. (BMP 4e-1)• Reviewing the SWPPP and annual reports, available online and at City Hall. (BMP 2b-1)• Offering comments on the SWPPP. (BMP 2c-1)• Attending the annual public meeting. (BMP 1e-1) Citizens will be informed of these possible activities through utility billings (BMP 1a-1) and published public notices. (BMP 2a-1)	
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.	
Activity Implementation Plan: Baseline – The City currently does not make an effort to include citizens in storm water pollution prevention planning efforts. 2007 – Post SWPPP on the City's website. 2008 – 2011 Post the annual reports on the City's website. 2007 – 2011 Publish note about annual meetings and a request for comments in utility billings. 2008 – 2011 Annually publish a public meeting notice as described in BMP 2a-1.	
Performance Measures: The City of Mankato will measure and show effectiveness by: <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. The City of Mankato will be able to quantify the work done on this BMP by: <ul style="list-style-type: none">• # of calls to the storm water hotline. (BMP 4e-1)• # of people in attendance at the public information meeting. (BMP 1e-1)• # of utility billings that reference upcoming meetings and request comments. (BMP 1a-1)• # of comments received on the SWPPP. (BMP 2c-1)• # of hits on the SWPPP link and Annual Report links on the website. (BMP 2b-1)	
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	Recordkeeping & Reporting: See BMP Sheets listed above.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1c-3 (Permit Section V.G.1.b,c)

BMP Title: EDUCATION PROGRAM: ILLICIT DISCHARGE DETECTION AND ELIMINATION	
Audience(s) Involved: General Public. City employees, especially field staff in the utilities, streets, and engineering departments. Businesses with an above-average potential for illicit discharges.	
Educational Goals for Each Audience: All audiences should be able to define illicit discharge and understand the impact illicit discharges have on the water quality of our water resources. City field staff will be able to identify illicit discharges and report to the appropriate authorities. Businesses with the above-average potential for illicit discharges will be able to: <ul style="list-style-type: none">• Identify practices that may lead to illicit discharges.• Modify practices to reduce the potential of illicit discharges.• Understand the legal consequences of illicit discharge.• Identify the nearest storm drain inlets, identify the end outlet and state whether the drainage receives treatment before being discharged into a natural resource. The General Public should understand: <ul style="list-style-type: none">• How to properly dispose of household wastes.• How to report illicit discharges to the appropriate authorities.	
Activities Used to Reach Educational Goals: Targeted mailings will be sent to businesses identified as having an above-average potential for illicit discharges. Door hangers such as the one developed by the EPA (#833-F-03-002) will be posted in areas where illicit discharges have been detected. Illicit discharges will be one of the topics covered in BMP 1a-1.	
Activity Implementation Plan: Baseline – The City has put a limited effort toward educating its citizens and staff about illicit discharges. 2007 – Train key field staff to be able to define and identify illicit discharges in the field. 2008 – Begin using door hangers in areas where illicit discharges have been detected. 2009 – Start targeted mailings increasing awareness of the impact illicit discharges have on our water resources. 2010 – Begin distribution of education materials on illicit discharges for the general public. 2007 – 2011 Annually evaluate the effectiveness of this BMP and amend if necessary.	
Performance Measures: The City of Mankato will measure and show effectiveness by: <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. The City of Mankato will be able to quantify the work done on this BMP by: <ul style="list-style-type: none">• # of field staff trained on illicit discharges.• # of flyers mailed out to businesses or in utility bills.	Recordkeeping & Reporting: # of trained employees (TE) # of utility billings or flyers sent out (UB) 2008: TE = _____ UB = _____ 2009: TE = _____ UB = _____ 2010: TE = _____ UB = _____ 2011: TE = _____ UB = _____ 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009, etc.
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1c-4 (Permit Section V.G.1.b,c)

BMP Title: **EDUCATION PROGRAM: CONSTRUCTION SITE RUN-OFF CONTROL**

Audience(s) Involved: The following groups will be considered as the audience for this educational component:

- City Construction Inspectors
- Businesses that disturb soil including, but not limited to: contractors, developers, utility companies, home builders, and landscapers.
- General Public.

Educational Goals for Each Audience:

City Staff members affected by construction site will be able to:

- Understand the importance of erosion and sediment control.
- Identify and report erosion and sediment control problems to the appropriate staff person.

Businesses that disturb soils will be able to:

- Understand the importance of erosion and sediment control.
- Understand the city ordinances that require erosion and sediment controls on construction sites.
- Understand the conditions that require a NPDES permit.

The General Public will be able to:

- Understand the importance of erosion and sediment control.
- Identify and report erosion and sediment control problems to the appropriate authorities.

Activities Used to Reach Educational Goals:

Engineering field staff will continue to attend erosion and sediment control courses annually through the U of M. Soil-disturbing businesses receive the legal notice described in BMP 4b-1 and may be educated as needed during on-site inspections. They will also be invited to the annual Mankato/North Mankato Erosion Control Seminar. The general public will be educated through the distribution of materials as indicated in BMP 1a-1.

Activity Implementation Plan:

Baseline – The City currently sends engineering staff to erosion control training, but does not focus training on any of the other audiences listed.

2007 – 2011 Provide educational materials to the audiences listed above.

Performance Measures:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of City inspectors that are certified through the U of M.
- # of attendees at the erosion control seminar.
- # of educational materials mailed to citizens (BMP 1a-1)

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of certified city staff (CCS)

of seminar attendees (SA)

2007: CCS = _____ SA = _____

2008: CCS = _____ SA = _____

2009: CCS = _____ SA = _____

2010: CCS = _____ SA = _____

Note: 2007 refers to Jan. 2007 – Dec. 2007,
2008 refers to Jan. 2008 – Dec. 2008, etc.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1c-5 (Permit Section V.G.1.b,c)

BMP Title: **EDUCATION PROGRAM: POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

Audience(s) Involved: The following groups will be considered the key audience groups for this BMP:

- City staff involved in post construction activities including, but not limited to the departments of community development, engineering, and parks.
- Businesses involved in post construction activities including, but not limited to: contractors, home builders, developers, architects, engineers, and landscapers.
- New Homeowners and the General Public

Educational Goals for Each Audience:

All groups will be able to :

- Understand the importance of storm water management.
- Identify activities that negatively impact our water resources and report to the appropriate authorities.

City staff members (involved in post construction) will be able to:

- Review site plans for adherence to City specifications.

Businesses involved in post construction will be able to:

- Prepare site plans that adhere to City specifications with the use of a site plan checklist.
- Implement appropriate measures in post-construction that will not negatively impact our water resources.

New Homeowners and the General Public will be able to:

- Identify controls that they can implement that would prevent or reduce water quality impacts.

Activities Used to Reach Educational Goals:

Post-construction storm water management will be one of the topics addressed in BMP 1a-1.

The City will develop a grading plan checklist that is used to review grading plans. This checklist will be made available to businesses and citizens on the City's website, as well as at the Intergovernmental Center.

Activity Implementation Plan:

Baseline – The City currently has not educated citizens in terms of post-construction storm water management.

2007 – Develop site plan checklist.

2008 – Make the site plan checklist available on the City's website and at the Intergovernmental Center.

2009 – Distribute educational material to the general public regarding their role reducing impacts to water quality.

2010 – 2011 Annually review policies and procedures and amend if necessary.

Performance Measures:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of website hits on the city's site plan checklist.
- # of educational efforts made to educate the general public.

Recordkeeping & Reporting:

of website hits for the site
plan checklist (WH)

of educational efforts (EE)

2008: WH = _____ EE = _____

2009: WH = _____ EE = _____

2010: WH = _____ EE = _____

2011: WH = _____ EE = _____

2008 refers to June 2007 – June 2008; 2009 =
June 2008 – June 2009, etc.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1c-6 (Permit Section V.G.1.b,c)

BMP Title:

EDUCATION PROGRAM: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Audience(s) Involved:

Public Works Departments – Parks, Utilities, Wastewater Plant, Water Plant, Central Garage, Mass Transit, Streets
Public Safety Departments – Fire, Police, Joint Services
Facilities – Civic Center, Airport, Tech Plus, City Hall

Educational Goals for Each Audience:

Each department, with assistance from the MS4 Coordinator, will be able to:

- Identify the path storm water takes from facility grounds into catch basins within 200' of the property line.
- Identify the end outlet associated with each catch basin and state whether or not the water receives treatment prior to entry into the Minnesota River or other natural body of water.
- Determine potential on-site sources of pollution that could enter the storm drain system.
- Identify procedures already in place to prevent storm water pollution.
- Identify areas that could be improved in terms of storm water pollution prevention, if any.
- Develop a plan of action to correct any shortcomings identified in the assessment process.

Activities Used to Reach Educational Goals:

The MS4 coordinator will meet with each of the departments or facilities listed above and work with them to meet the educational goals for their facility.

Activity Implementation Plan:

Baseline – The City currently does not have a formal process to evaluate potential sources of storm water pollution.
2007 – 2011 Meet with a minimum of two or three departments per year to identify potential sources of pollution and determine the necessary actions to remedy any problems.

2007 – 2011 Annually meet with departments for a “check-up” after they have had their initial visit.

Performance Measures:

The City will measure and show effectiveness by:

- On-time completion of tasks in the implementation plan.

The City will be able to quantify the work done on this BMP by:

- # of visits to the various departments to discuss storm water pollution prevention.

Recordkeeping & Reporting:

of visits to city departments (DV)

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

June '07 – June '08: DV = _____

June '08 – June '09: DV = _____

June '09 – June '10: DV = _____

June '10 – June '11: DV = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1d-1 (Permit Section V.G.1.d)

BMP Title: **COORDINATION OF EDUCATION PROGRAM**

BMP Description:

The following MS4s are located within 20 miles of Mankato. It would be to the benefit of the area MS4s to work together to provide educational materials to the citizens in the area:

- City of North Mankato, MN (<1 mile)
- City of St. Peter, MN (15 miles)

Working together would also be beneficial for the 10 MS4s that are required to implement the Lower Minnesota River Dissolved Oxygen TMDL into their Storm Water Pollution Prevention Programs. The 9 other cities include:

- | | | |
|-------------------------|------------------------|--|
| • City of Fairmont | | |
| • City of Marshall | Contact Shane Waterman | swaterman@marshall.com |
| • City of Montevideo | | |
| • City of New Ulm | Contact Steve Koehler | steve.koehler@ci.new-ulm.mn.us |
| • City of North Mankato | Contact Marion Haayer | mhaayer@northmankato.com |
| • City of Redwood Falls | | |
| • City of St. Peter | Contact Amy Kamm | amyk@saintpetermn.gov |
| • City of Waseca | | |
| • City of Willmar | Contact Brian Bollig | bbollig@ci.willmar.mn.us |

The City may also find partnerships working with other community groups such as non-profits, lake or soil and water conservation districts, schools, university extension groups, watershed districts, and other county, state, or federal units of government. Examples include the following:

- | | | |
|-----------------------------|----------------------|----------------------|
| • Mankato Builders Exchange | Contact Amy Roach | Phone (507) 625-7138 |
| • Blue Earth County | Contact Julie Conrad | Phone (507) 304-4381 |
| • Water Resources Center | MSU, Mankato | Phone (507) 389-5492 |

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the above-referenced BMPs.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of combined educational efforts.

Timeline/Implementation Schedule:

Baseline: The group of 10 TMDL cities have met once already and agreed to work together.

2007 – 2011: Continue to look for opportunities to work together with additional organizations.

Specific Components and Notes:

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC
Department: Engineering
Phone: (507) 387-8643
E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of Combined Educational Efforts (CEE)

Year _____ CEE _____

June 2007 – June 2008:

June 2008 – June 2009:

June 2009 – June 2010:

June 2010 – June 2011:

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: PUBLIC EDUCATION AND OUTREACH

Unique BMP Identification Number: 1e-1 (Permit Section V.G.1.e)

BMP Title: ANNUAL PUBLIC MEETING											
Audience(s) Involved: The following groups will be considered the key audience groups for this BMP: <ul style="list-style-type: none">• City Council.• General Public											
BMP Description: The City will hold a minimum of one public meeting per year as required by section addressing the Storm Water Pollution Prevention Program. The meeting will be held prior to submittal of the annual report to the Commissioner of the MPCA. The meeting will be held in conjunction with a City Council meeting at City Hall. The City will follow the public notice requirements as described in BMP 2a-1 and section VG1e of the permit.											
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.											
Measurable Goals: The City of Mankato will measure and show effectiveness by: <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. The City of Mankato will be able to quantify the work done on this BMP by: <ul style="list-style-type: none">• # of people in attendance at the public information meeting.											
Timeline/Implementation Schedule: Baseline – The City currently does not hold a public meeting for storm water pollution prevention issues. 2008 – 2011 Annually conduct a public meeting prior to the June 30 th submittal deadline of the annual report.											
Specific Components and Notes: Joint meetings are allowed by the permit (VG1e4) provided that adequate notice and opportunity to participate is provided.											
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	<u>Recordkeeping & Reporting:</u> # of People in Attendance at Annual Meeting (PA) <table><thead><tr><th>Year</th><th>PA</th></tr></thead><tbody><tr><td>June 2007 – June 2008:</td><td></td></tr><tr><td>June 2008 – June 2009:</td><td></td></tr><tr><td>June 2009 – June 2010:</td><td></td></tr><tr><td>June 2010 – June 2011:</td><td></td></tr></tbody></table>	Year	PA	June 2007 – June 2008:		June 2008 – June 2009:		June 2009 – June 2010:		June 2010 – June 2011:	
Year	PA										
June 2007 – June 2008:											
June 2008 – June 2009:											
June 2009 – June 2010:											
June 2010 – June 2011:											

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 2-PUBLIC PARTICIPATION/INVOLVEMENT

Unique BMP Identification Number: 2a-1 (Permit Section V.G.2.a)

BMP Title: COMPLY WITH PUBLIC NOTICE REQUIREMENTS																																									
Target Audience: Citizens, City Council, Agency (MPCA), County Officials, Business Owners, Contractors																																									
BMP Description: <p>The City must hold at least one public information meeting per year addressing the Storm Water Pollution Prevention Program. The meeting must occur before the June 30th annual report submittal deadline. The City must publish a notice at least 30 days prior to the meeting in a newspaper of general circulation in the general vicinity of the MS4. (Mankato Free Press) The notice must contain the following information:</p> <ul style="list-style-type: none"> Date, time, and location of the meeting, A concise description of the manner in which the meeting will be conducted, and Location where a copy of the SWPPP is available for public review. <p>A copy of the notice must be made available to the Agency (MPCA), the appropriate City and County Officials, and all other persons who have requested that they be informed of public meetings for the Storm Water Pollution Prevention Program. The City will send copies of the notice to these parties.</p> <p>Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.</p>																																									
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none"> On-time completion of tasks in the implementation schedule. Affidavit of proof of publication. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none"> # of times the notice was published in the Mankato Free Press. # of officials and interested citizens who received a copy of the notice. 																																									
Timeline/Implementation Schedule: <p>Baseline – The City currently does not hold a public meeting for storm water pollution prevention issues. 2008 – 2011 Annually publish a notice 30 days in advance of the public information meeting.</p>																																									
Specific Components and Notes: <p>The City will follow the same procedures that the City Council currently uses for public hearings.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="background-color: #d3d3d3; text-align: center; padding: 5px;">Recordkeeping & Reporting:</th> </tr> <tr> <td colspan="5" style="text-align: center; padding: 5px;"># of Days the Notice was Published (P)</td> </tr> <tr> <td colspan="5" style="text-align: center; padding: 5px;"># of People who Received a Copy of the Notice (C)</td> </tr> <tr> <th style="text-align: left; padding: 5px;">Year</th> <th style="text-align: center; padding: 5px;">P</th> <th style="text-align: center; padding: 5px;">C</th> <th style="text-align: left; padding: 5px;">Publication Dates</th> <th style="text-align: left; padding: 5px;">Meeting Date</th> </tr> <tr> <td style="padding: 5px;">2008:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">2009:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">2010:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">2011:</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Recordkeeping & Reporting:					# of Days the Notice was Published (P)					# of People who Received a Copy of the Notice (C)					Year	P	C	Publication Dates	Meeting Date	2008:					2009:					2010:					2011:				
Recordkeeping & Reporting:																																									
# of Days the Notice was Published (P)																																									
# of People who Received a Copy of the Notice (C)																																									
Year	P	C	Publication Dates	Meeting Date																																					
2008:																																									
2009:																																									
2010:																																									
2011:																																									
Responsible Party for this BMP: <p style="margin-left: 40px;">Name: Emily Javens, PE, CPESC</p> <p style="margin-left: 40px;">Department: Engineering</p> <p style="margin-left: 40px;">Phone: (507) 387-8643</p> <p style="margin-left: 40px;">E-mail: stormwater@city.mankato.mn.us</p>																																									

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 2-PUBLIC PARTICIPATION/INVOLVEMENT

Unique BMP Identification Number: 2b-1 (Permit Section V.G.2.b)

BMP Title: **SOLICIT PUBLIC INPUT & OPINION ON THE ADEQUACY OF THE SWPPP**

Target Audience: Citizens, City Council, Agency (MPCA), County Officials, Business Owners, Contractors

BMP Description:

As required by the permit, the City must solicit public input and opinion on the adequacy of the Storm Water Pollution Prevention Program. It must allow interested parties a reasonable opportunity to make oral statements concerning the Program and must consider timely, relevant written materials that interested parties submit concerning the Program. At a minimum, the City will issue a press release and print a public notice soliciting public opinion on the program prior to the annual meeting.

Comments can be received all year long on the SWPPP. The City will add a "Send Comment" button on the storm water webpage.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of efforts made to solicit public opinion.
- # of comments received at the public information meeting.
- # of written comments received.
- # of comments submitted through the website.

Timeline/Implementation Schedule:

Baseline – The City currently does not solicit comments for storm water pollution prevention.

2008 – 2011 Annually solicit written and oral comments on the adequacy of the SWPPP through a press release, public notice, and the City's website.

Specific Components and Notes:

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of Efforts Made to Solicit Input (E)

of Comments Received at Meeting (MC)

of Written Comments Received (WC)

of Comments Submitted through the Website (Web)

2008: E = _____ MC = _____ WC = _____ Web = _____

2009: E = _____ MC = _____ WC = _____ Web = _____

2010: E = _____ MC = _____ WC = _____ Web = _____

2011: E = _____ MC = _____ WC = _____ Web = _____

Note: 2008 refers to June 2007 – June 2008; 2009 = June 2008 – June 2009, etc.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 2-PUBLIC PARTICIPATION/INVOLVEMENT

Unique BMP Identification Number: 2c-1 (Permit Section V.G.2.c)

BMP Title: **CONSIDER PUBLIC INPUT**

Target Audience: Citizens, City Council, Agency (MPCA), County Officials, Business Owners, Contractors

BMP Description:

As required by the permit, the City must consider the public input, oral and written, to the Storm Water Pollution Prevention Program and shall make adjustments that the City finds appropriate.

The MS4 Coordinator will record the comments received and determine an appropriate action, if any, for each comment. The comments and corresponding responses will be published in a document that will be made available to the public on the City's website. Those submitting comments will receive a mailed copy of the document.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of comments received, written and oral.
- # of changes made to the SWPPP as a result of public comments.

Timeline/Implementation Schedule:

Baseline – The currently does not solicit comments for storm water pollution prevention issues.

2007 – 2011 Annually record comments and offer responses in a document that will be made available to the public on the City's website. Mail the document to those submitting comments.

Specific Components and Notes:

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of Total Comments Received (TC)

of Changes Made to SWPPP (CM)

2008: TC = _____ CM = _____

2009: TC = _____ CM = _____

2010: TC = _____ CM = _____

2011: TC = _____ CM = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 3-ILLICIT DISCHARGE DETECTION AND ELIMINATION

Unique BMP Identification Number: 3a-1 (Permit Section V.G.3.a)

BMP Title: **STORM SEWER SYSTEM MAP**

Target Audience: City Staff

BMP Description:

The City of Mankato currently has a schematic storm system map that shows existing ponds, streams, lakes, wetlands, structural pollution control devices, catch basins, manholes, underdrain cleanouts, inlets/outlets, and storm pipes. The City's cartographer updates this map once construction is completed and the as-built drawings are turned in.

The City is beginning the process to develop a GPS-based GIS system. As the process unfolds, the City will set more specific goals for data collection.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of catch basins, manholes, underdrain cleanouts, and inlets/outlets.
- # of miles of storm pipe.

Timeline/Implementation Schedule:

Baseline- The City has a map that defines the storm drain system but City staff feels that gaps in information likely exist.

2007 – Evaluate completeness of maps and define information gaps.

2008 – Update map with missing information.

2008 – GPS collection of discharge point locations.

2009 – 2010 GPS collection of catch basin and manhole locations.

2007 – 2011 Continue to update map with construction as-built drawings.

Specific Components and Notes:

Resources Needed:

- Staff time to evaluate completeness of map.
- Staff time to collect missing pieces of data.
- Staff time to update map.
- Staff time for GPS data collection.
- Staff time to build GPS-based GIS map.

Recordkeeping & Reporting:

of Catch Basins (CB)

of Manholes (MH)

of Underdrain Cleanouts (CO)

of Inlets/Outlets (IO)

of Miles of Pipe (MP)

	CB	MH	CO	IO	MP
2007:	785	206	597	556	107
2008:					
2009:					
2010:					
2011:					

Note: data listed is recorded in the spring of the given year.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Cartographer: Don Nies

Department: Engineering

Phone: (507) 387-8632

E-mail: emap@city.mankato.mn.us

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 3-ILLICIT DISCHARGE DETECTION AND ELIMINATION

Unique BMP Identification Number: 3b-1 (Permit Section V.G.3.b)

BMP Title: **REGULATORY CONTROL PROGRAM**

Target Audience: City Staff, Citizens, Contractors, Developers, Home Builders

BMP Description:

The City adopted Ordinance 3.33 to prohibit non-storm water discharges from entering the storm drain system.

Ordinance 3.33 Storm Water System

1. Unlawful Acts. It is unlawful for any person directly or indirectly discharge, place or cause to be discharged any of the following described substances into the City's storm water system.

A. Any liquids, solids, or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the storm sewer system or receiving body. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides.

B. Solid or viscous substances which will or may cause obstruction to the flow in the storm water system such as, but not limited to grease, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastic, gas, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud, glass grinding, or polishing wastes.

C. Any water having a pH less than 6.0 or more than 10.0 or having any other corrosive properties capable of causing damage or hazard to structures or equipment.

D. Any water containing toxic pollutants in sufficient quantity, either singly or by interaction with other pollutants to constitute a hazard to humans or animals, or create a toxic effect in the receiving waters.

E. Any noxious or malodorous liquids, gases, or solids which either singly or by interaction with other wastes are capable of creating a public nuisance or hazard to life or are sufficient to prevent entry into the sewers for their maintenance and repair.

F. Any water having an aesthetically unattractive color which would cause an adverse effect to receiving body.

G. Any effluent which creates conditions in the receiving body which violate any statute or any rule, regulation, or ordinance of any public agency or state or federal regulatory body.

H. Any water having a temperature greater than 150°F (65.5°C), or causing, individually or in combination with other water, the influent at the receiving body to have a temperature exceeding 104°F (40°C) or having heat in amounts which will inhibit biological activity in the receiving body.

I. Any slug load, which shall mean any pollutant, including oxygen demand pollutants, (BOD, etc.) released in a discharge of such volume or strength as to effect the receiving body.

J. Radioactive wastes or isotopes of such a half-life or concentration that they are in noncompliance with standards issued by the appropriate authority having control over their use.

K. Water containing any toxic heavy metals in such concentrated strengths to cause adverse effects to the receiving body.

2. Legal Action. If any person discharges wastewater, industrial wastes or other wastes into the City's storm water system contrary to the provisions of this Section, federal or state regulations or any order of the City, in addition to any criminal prosecution for violation of this section, the City Attorney may commence an action for appropriate legal and/or equitable relief to terminate violation and recover all expenses as allowed in Chapter 3 of this Code. (*Ord. of 11-28-1988*)

The City determined that the biggest pollutant in the storm drain system is sediment. During the summer of 2006, the City stepped up enforcement to reduce the amount of sediment entering the storm drain system. If tracking was observed near a construction site, a warning was posted with the expectation that the sediment be cleaned up within 24 hours. If the street was not cleaned up, the City did the cleanup and the contractor was billed for the cleanup costs. Starting in 2007, contractors will be required to sign a legal notice when applying for a building permit that making them aware of the ordinance and its consequences. The contractor will only have until the end of the day to do clean up. For other illicit discharges, the City typically tries to work with the responsible parties to fix the problem. If the violator is uncooperative, the City will issue a warning with a deadline to correct the situation. If the violation is not corrected, the City will remedy the situation with expenses going to the violator. If necessary, further legal actions may be required.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of sediment complaints investigated.
- # of other illicit discharges investigated.
- # of enforcement actions.

Timeline/Implementation Schedule:

Baseline- The City has an in-place ordinance that defines illicit discharges to the system.

2007 – 2011 Review the ordinance annually and amend if necessary.

2007 – 2011 Continue enforcement actions as described above.

Specific Components and Notes:

Resources Needed:

- Staff time to amend ordinance if necessary.
- Staff time to enforce ordinance.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

of sediment complaints (S)

of illicit discharge complaints (ID)

of enforcement actions (EA)

2007: S = _____ ID = _____ EA = _____

2008: S = _____ ID = _____ EA = _____

2009: S = _____ ID = _____ EA = _____

2010: S = _____ ID = _____ EA = _____

2011: S = _____ ID = _____ EA = _____

Note: "2007" refers to the Construction Season of 2007, 2008 refers to the Construction season of 2008, etc.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 3-ILLICIT DISCHARGE DETECTION AND ELIMINATION

Unique BMP Identification Number: 3c-1 (Permit Section V.G.3.c)

BMP Title:	ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN							
Target Audience: City Staff, Citizens								
BMP Description: The City uses the following procedures to detect and eliminate illicit discharges: <ol style="list-style-type: none">1. Storm Drain Televising- The City televises storm drains for illegal connections if suspected.2. Sanitary Sewer Televising- All newly constructed sanitary sewers are televised and pressure tested before being accepted by the City. If leaks are found, the contractor is obligated to fix them.3. Sanitary Sewer Service Extensions – The City has extended sanitary sewer service to adjacent communities and townships that have experienced failing septic systems.4. Elimination of Sanitary Sewer Overflow – In 1983, the City eliminated the sanitary sewer overflow to the Minnesota River.5. Lift station Failures- Bypass procedures are in-place. The City will be implementing the following procedures as part of this SWPPP: <ol style="list-style-type: none">6. Complaint Line – See BMP Sheet #4e-1 for details.7. Outfall Inspections – See BMP Sheet #6b-3 for details. The following procedures need to be investigated and documented: <ol style="list-style-type: none">8. Pre-treatment Inspections - Who inspects businesses that have on-site pre-treatment?9. Hazardous Material Handlers - Who performs inspections? How often are they performed?10. Emergency Procedures for Spills- What are they? Who handles them? What are the procedures? The City will use the Guidance Manual for Illicit Discharge Detection and Elimination Program Development and Technical Assessments (produced by the Center for Watershed Protection) to build a stronger IDDE program.								
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.								
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none">• # of illicit discharges investigated, detected, and eliminated annually.								
Timeline/Implementation Schedule: <p>Baseline- The City currently has a variety of programs in place to detect and eliminate illicit discharges. 2007 – Research and document the procedures associated with items #8-10 listed above. 2007 – Set timelines for implementing a stronger IDDE program. 2008 – 2011 Implement additional IDDE program components.</p>								
Specific Components and Notes: <p>Resources Needed:</p> <ul style="list-style-type: none">• Staff time to research various procedures already in place.• Staff time to build and implement a stronger IDDE program.	<table border="1"><tr><td>Recordkeeping & Reporting</td></tr><tr><td># of illicit discharges investigated (I) # of illicit discharges detected (D) # of illicit discharges eliminated (E)</td></tr><tr><td>2008: I = ____; D = ____; E = ____</td></tr><tr><td>2009: I = ____; D = ____; E = ____</td></tr><tr><td>2010: I = ____; D = ____; E = ____</td></tr><tr><td>2011: I = ____; D = ____; E = ____</td></tr><tr><td><small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small></td></tr></table>	Recordkeeping & Reporting	# of illicit discharges investigated (I) # of illicit discharges detected (D) # of illicit discharges eliminated (E)	2008: I = ____; D = ____; E = ____	2009: I = ____; D = ____; E = ____	2010: I = ____; D = ____; E = ____	2011: I = ____; D = ____; E = ____	<small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small>
Recordkeeping & Reporting								
# of illicit discharges investigated (I) # of illicit discharges detected (D) # of illicit discharges eliminated (E)								
2008: I = ____; D = ____; E = ____								
2009: I = ____; D = ____; E = ____								
2010: I = ____; D = ____; E = ____								
2011: I = ____; D = ____; E = ____								
<small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small>								
Responsible Party for this BMP: <p>Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us</p>								

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 3-ILLICIT DISCHARGE DETECTION AND
ELIMINATION

Unique BMP Identification Number: 3d-1 (Permit Section V.G.3.d)

BMP Title:	PUBLIC & EMPLOYEE ILLICIT DISCHARGE INFORMATION PROGRAM
Target Audience: General Public, City Staff	
BMP Description: <u>Public Illicit Discharge Information Program</u> The educational efforts that will apply to the general public are described in BMP Sheet 1c-3. <u>Employee Illicit Discharge Information Program</u> The educational efforts that will apply to city employees are described in BMP Sheet 1c-3.	
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.	
Measurable Goals: See BMP Sheet 1c-3 for measurable goals associated with this BMP.	
Timeline/Implementation Schedule: See BMP Sheet 1c-3 for the timelines and implementation schedule associated with this BMP.	
Specific Components and Notes:	
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	Recordkeeping & Reporting See BMP Sheet 1c-3.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 3-ILLCIT DISCHARGE DETECTION AND ELIMINATION

Unique BMP Identification Number: 3e-1 (Permit Section V.G.3.e)

BMP Title: IDENTIFICATION OF NON STORMWATER DISCHARGES AND FLOWS																			
Target Audience: City Staff, Citizens																			
BMP Description: <p>The City will annually evaluate whether the following discharges are significant contributors of pollutants to the MS4 as listed in the permit:</p> <p>water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and discharges or flows from fire fighting activities.</p> <p>The City will develop a plan of action for any non-storm water discharge that is believed to be a significant contributor of pollutants. At the current time, the City does not feel that the above listed discharges are significant contributors of pollutants.</p> <p>Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.</p>																			
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none">• # of discharge types evaluated per year.• # of discharge types believed to be significant contributors of pollutants.																			
Timeline/Implementation Schedule: <p>Baseline- The City does not believe the discharges listed above are significant contributors of pollutants. 2007-2011 – Annually review the list of discharges and determine if any of them are problematic. 2007-2011 – Develop a plan of action if necessary.</p>																			
Specific Components and Notes: <p>Resources Needed:</p> <ul style="list-style-type: none">• Staff time to discuss the severity of pollutants entering the MS4.• Staff time to develop a plan of action for problematic discharges.	<table border="1"><tr><th colspan="2">Recordkeeping & Reporting</th></tr><tr><td colspan="2"># of discharges evaluated (DE)</td></tr><tr><td colspan="2"># of problematic discharges (PD)</td></tr><tr><td>2007:</td><td>DE = 19 PD = 0</td></tr><tr><td>2008:</td><td>DE = _____ PD = _____</td></tr><tr><td>2009:</td><td>DE = _____ PD = _____</td></tr><tr><td>2010:</td><td>DE = _____ PD = _____</td></tr><tr><td>2011:</td><td>DE = _____ PD = _____</td></tr><tr><td colspan="2"><small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small></td></tr></table>	Recordkeeping & Reporting		# of discharges evaluated (DE)		# of problematic discharges (PD)		2007:	DE = 19 PD = 0	2008:	DE = _____ PD = _____	2009:	DE = _____ PD = _____	2010:	DE = _____ PD = _____	2011:	DE = _____ PD = _____	<small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small>	
Recordkeeping & Reporting																			
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2010:	DE = _____ PD = _____																		
2011:	DE = _____ PD = _____																		
<small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small>																			
Responsible Party for this BMP: <p>Name: Emily Javens, PE, CPESC</p> <p>Department: Engineering</p> <p>Phone: (507) 387-8643</p> <p>E-mail: stormwater@city.mankato.mn.us</p>																			

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Minimum Control Measure: 4-CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Unique BMP Identification Number: 4a-1 (Permit Section V.G.4.a)

BMP Title:	ORDINANCE OR OTHER REGULATORY MECHANISM		
Target Audience:	Construction Crews, Developers, Contractors, Home Builders		
BMP Description: Ordinance 12.02 requires the use of BMPs when developing property within the City. Ordinance 12.02 Erosion and Sediment Control Subd. 1. Construction Site Erosion, Sediment and Drainage Control. A. During the development of property in the City of Mankato, best management practices shall be employed to control water runoff and sediment erosion on adjacent properties, streets, storm drains, ponding areas, or other water courses. B. Best management practices shall conform with the following guidelines: 1. Property and streets adjacent to the site of a land disturbance shall be protected from sediment deposition. This shall be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters, dikes or sediment basins, by stockpiling soil in appropriate locations or by a combination of such measures. 2. All storm sewer inlets which are functioning during construction shall be protected so that sediment-laden water will not enter the conveyance system without first being filtered or otherwise treated to remove sediment. 3. Property and waterways downstream from development sites shall be protected from flooding and erosion due to increases in the volume, velocity and peak water flow rate of storm water runoff. Concentrated storm runoff water leaving a development's site must be discharged directly into a well-defined natural or man-made off-site receiving channel or pipe. 4. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized forthwith after land disturbing activity is complete. 5. Whenever construction vehicles access public roads, provision shall be made to minimize the transport of sediment by runoff or vehicle tracking onto the paved surface. Where sediment is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day. 6. All temporary and permanent erosion and sediment control practices shall be maintained and repaired to assure the continued performance of their intended function. 7. All temporary erosion and sediment control measures shall be removed within thirty (30) days after final site stabilization is achieved or after the temporary measures are no longer needed. C. The City's Building Official may issue stop work orders for any violation of this ordinance. (Ord. of 12-13-93) Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP. Measurable Goals: The City of Mankato will be able to quantify the work done on this BMP by: • # of stop work orders issued. Timeline/Implementation Schedule: Baseline – The City has an ordinance that addresses erosion and sediment controls for construction sites. 2007-2011 – Annually review the ordinance and amend if necessary. Specific Components and Notes: <table border="1"><tr><td>Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us</td><td>Recordkeeping & Reporting # of Stop Work Orders (SWO) 2007: SWO = _____ 2008: SWO = _____ 2009: SWO = _____ 2010: SWO = _____ Note: "2007" refers to the Construction Season of 2007, "2008" refers to the Construction season of 2008. etc.</td></tr></table>		Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	Recordkeeping & Reporting # of Stop Work Orders (SWO) 2007: SWO = _____ 2008: SWO = _____ 2009: SWO = _____ 2010: SWO = _____ Note: "2007" refers to the Construction Season of 2007, "2008" refers to the Construction season of 2008. etc.
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	Recordkeeping & Reporting # of Stop Work Orders (SWO) 2007: SWO = _____ 2008: SWO = _____ 2009: SWO = _____ 2010: SWO = _____ Note: "2007" refers to the Construction Season of 2007, "2008" refers to the Construction season of 2008. etc.		

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Minimum Control Measure: 4-CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Unique BMP Identification Number: 4b-1 (Permit Section V.G.4.b)

BMP Title:

CONSTRUCTION SITE IMPLEMENTATION OF EROSION AND SEDIMENT CONTROL BMPs

Target Audience: Construction Crews, Developers, Contractors, Home Builders

BMP Description:

Starting in February of 2007, contractors will be required to sign the legal notice shown below when applying for a building permit. It reminds them of Ordinances 3.33 (see BMP Sheet 3b-1) and Ordinance 12.02 (see BMP Sheet 4a-1) and the associated consequences. The notice also lets them know that there will be no further warnings.



*****LEGAL NOTICE*****

STORM WATER MANAGEMENT REQUIREMENTS

In accordance with Federal Regulation 40 CFR 122.26, Minnesota Statute 115.03, and Minnesota Rules Chapter 7090, the City of Mankato is issuing this legal notice as part of its Storm Water Pollution Prevention Program.

As the Permit Owner, I understand that at any time during this construction period I am responsible for the proper management of this site. This includes actions by all contractors, sub-contractors, suppliers, utility contractors, deliveries of any kind or any other person visiting the site, or any condition changes that might be considered an act of God.

Mankato City Ordinance 3.33 prohibits anything other than storm water from entering the storm drain system. If at any time mud, silt and other debris migrates from your construction site onto the City street, you are in violation of this code. Ordinance 12.02 states that any material that does migrate onto the street must be cleaned by the end of each day. Any material found on the street the following morning will be cleaned by City crews and the Permit Owner will be responsible for any and all costs incurred. The cleanup will include a sweeping of the road surface, cleaning catch basins and storm water pipes to restore them to their original conditions. The minimum charge will be mobilization cost and one hour labor and equipment (2007 minimum rate is \$238). Furthermore, failure to implement best management practices to keep material on the construction site may result in a stop work order as described in Ordinance 12.02. The Permit Owner will receive no other notices. Please be prepared for inspections to occur on a regular basis.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will be able to quantify the work done on this BMP by:

- # of signed legal notices.

Timeline/Implementation Schedule:

Baseline – The City has started requiring contractors to sign a legal notice reminding them of BMP requirements.
2008 – 2011 – Annually review the legal notice and amend as necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to issue and amend legal notices.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

of Signed Legal Notices (LN)

2007: LN = _____

2008: LN = _____

2009: LN = _____

2010: LN = _____

2011: LN = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Minimum Control Measure: 4-CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Unique BMP Identification Number: 4c-1 (Permit Section V.G.4.c)

BMP Title: WASTE CONTROLS FOR CONSTRUCTION SITE OPERATORS	
Target Audience: Construction Crews, Developers, Contractors, Home Builders	
BMP Description: <p>At the start of the City's MS4 SWPPP planning, the City did not have any requirements that exceed current state and federal regulations. As part of the MS4 SWPPP planning, a survey was given to various City field staff to determine the perceived severity of waste control issues on construction sites in Mankato. The results of the survey indicated that most waste seems to be handled appropriately, yet there is room for improvement. The improper disposal of litter and concrete washout were the two areas of greatest concern. In 2007, the City will evaluate our City Construction Specifications and add language that would more clearly define the proper methods of disposal for litter and concrete washout. By the 2008 construction season, procedures will be in place to enforce violations associated with the improper disposal of concrete washout and litter. Annually, the City will review current waste control issues, policies, and procedures. If new waste control issues are identified, new policies and procedures will be researched and implemented for the following construction season.</p>	
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.	
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none">• # of new waste control measures that need to be addressed annually.• # of waste control violations and enforcement actions reported annually.	
Timeline/Implementation Schedule: <p>Baseline – The City does not have any requirements that exceed state and federal guidelines for waste controls. 2007 – Determine methods to better handle waste control measures for concrete washout and litter. 2008 – Start enforcement procedures for non-compliance. 2009-2011 – Annually review policies and amend if necessary.</p>	
Specific Components and Notes: <p>Resources Needed:</p> <ul style="list-style-type: none">• Staff time to research methods of handling waste locally.• Staff time to investigate complaints and violations.	Recordkeeping & Reporting: <p># of waste controls addressed in City Construction Specifications (WC) # of waste control violations (WCV)</p> <p>2007: WC = _____ WCV = _____ 2008: WC = _____ WCV = _____ 2009: WC = _____ WCV = _____ 2010: WC = _____ WCV = _____</p> <p>2007 = Construction Season of 2007; 2008 = Construction Season of 2008. etc.</p>
Responsible Party for this BMP: <p>Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us</p>	

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Minimum Control Measure: 4-CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Unique BMP Identification Number: 4d-1 (Permit Section V.G.4.d)

BMP Title: PROCEDURE FOR SITE PLAN REVIEW	
Target Audience: Construction Crews, Developers, Contractors, Home Builders	
BMP Description: At the start of the City's MS4 SWPPP planning, the City had a site plan review process outlined in Ordinance 10.90. All City departments review the plans. In order to make the process more effective, the City will develop an erosion and sediment control checklist for site plan review and make it available to those submitting plans. Building permits will not be issued until appropriate erosion prevention and sediment control measures have been designed and submitted.	
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.	
Measurable Goals: The City of Mankato will measure and show effectiveness by: <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. The City of Mankato will be able to quantify the work done on this BMP by: <ul style="list-style-type: none">• # of site plans reviewed.	
Timeline/Implementation Schedule: Baseline – The City does not have a formal process for erosion and sediment control site plan review. 2007 – Develop checklist. 2008 – Distribute checklist to parties submitting plans to the Planning Commission. 2008 – Begin using checklist to review site plans. 2009-2011 – Annually review the checklist and amend if necessary.	
Specific Components and Notes: Resources Needed: <ul style="list-style-type: none">• Staff time to develop checklist.• Staff time to notify parties submitting plans.• Staff time to conduct site plan reviews.	Recordkeeping & Reporting: # of Site Plans Reviewed for Erosion and Sediment Control (SPR) 2008: SPR = _____ 2009: SPR = _____ 2010: SPR = _____ 2011: SPR = _____ <small>Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009; 2010 = June 2009 – June 2010; 2011 = June 2010 – June 2011</small>
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Minimum Control Measure: 4-CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Unique BMP Identification Number: 4e-1 (Permit Section V.G.4.e)

BMP Title: **ESTABLISHMENT OF PROCEDURES FOR THE RECEIPT AND CONSIDERATION OF REPORTS OF STORM WATER NONCOMPLIANCE**

Target Audience: Citizens

BMP Description:

At the start of the City's MS4 SWPPP planning, the City did not have a formal procedure for receiving and responding to complaints related to construction site storm water runoff non-compliance. In early 2007, the City submitted a request to add the following listings to the phone book:

Mankato, City of Engineering

Erosion and Sediment Control (507) 387-8643

Storm Water Pollution Prevention.....(507) 387-8643

During 2007, the City will adopt formal procedures that will track complaints from start to finish. The City will also add the capabilities to report non-compliance through our website.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of complaints received.
- # of enforcement actions.

Timeline/Implementation Schedule:

Baseline – The City currently does not have a formal procedure for receiving and responding to complaints related to storm water pollution, however has set up a listing for the next printing of the phonebook.

2007 – Establish procedures to handle complaints.

2008-2011 – Annually review policies and procedures and amend if necessary.

Specific Components and Notes:

Resources Needed-

- Staff time to develop procedures to handle complaints.
- Staff time to investigate complaints.
- Staff time to record investigation findings.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of complaints received (C)

of enforcement actions (EA)

2007: C = _____ EA = _____

2008: C = _____ EA = _____

2009: C = _____ EA = _____

2010: C = _____ EA = _____

Note: 2007 = Jan 2007 – Dec 2007; 2008 = Jan 2008 – Dec 2008, etc.

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Minimum Control Measure: 4-CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Unique BMP Identification Number: 4f-1 (Permit Section V.G.4.f)

BMP Title: **ESTABLISHMENT OF PROCEDURES FOR SITE INSPECTIONS AND ENFORCEMENT**

Target Audience: Construction Crews, Developers, Contractors, Home Builders

BMP Description:

At the start of the City's MS4 SWPPP planning, the City did not have a procedure for conducting site inspections or enforcement actions. The City relied mainly on the MPCA to enforce non-compliance with construction site runoff. The exception was that the City would notify contractors to clean up the street if tracking occurred. If the streets were not cleaned up within 24 hours, the City cleaned the street and storm drains with the costs of the cleanup charged to the contractor. Site inspections will begin on a regular basis starting with the 2007 construction season. Procedures will be modified on an annual basis to accommodate lessons learned from the season's construction inspection experiences.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of inspections completed.
- # of enforcement actions.

Timeline/Implementation Schedule:

Baseline – The City does not have a formal process for inspecting construction sites and enforcing ordinances.

2007 – Create procedures for inspections.

2007 – Begin inspections during the 2007 construction season.

2007 – Begin enforcement actions for non-compliance.

2008-2011 – Annually review policies and procedures and amend if necessary.

Specific Components and Notes:

Resources needed:

- Staff time to develop a site inspection program.
- Staff time to educate contractors about new procedures.
- Staff time to conduct site inspections.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

of Site Inspections (SI)

of Enforcement Actions (EA)

2007: SI = _____ EA = _____

2008: SI = _____ EA = _____

2009: SI = _____ EA = _____

2010: SI = _____ EA = _____

Note: 2007 refers to the construction season of 2007, 2008 refers to the construction season of 2008, etc.

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 5-POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Unique BMP Identification Number: 5a-1 (Permit Section V.G.5.a)

BMP Title: **DEVELOPMENT AND IMPLEMENTATION OF STRUCTURAL AND/OR NON-STRUCTURAL BMPS**

Target Audience: Developers

BMP Description:

Master storm water planning has been and will continue to be a priority for the City. The City implemented its first Master Drainage Plan in February 1972. The plan was updated in April 1994 and the following reports now supplement the master plan to include areas that were outside the scope of the 1994 Plan

- Detailed Storm Water Study- Eastern Portion of Upper Indian Creek Watershed – June 1997,
- Country Wood Subdivision Drainage Study- June 2002, and
- Eastern Portion of the Upper Indian Creek Watershed – February 2006.

These plans provide ongoing guidance in regards to the types, locations, and sizes required of planned BMPs that meet rate control and water quality goals for the area. New plans of development must meet the recommendations of the Master Plan, otherwise they must submit an alternative plan that includes a revised storm water model that demonstrates appropriate storm water management.

The BMPs recommended in the Master Drainage Plan are predominantly structural. The City will need to put more emphasis on non-structural BMPs in order to meet the goals of the TMDLs on the Minnesota River. As of 2007, the City has two rain gardens and would consider adding more when and if the long term maintenance needs prove to be feasible and the infiltration capacities prove to be effective.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of amendments added to the 1994 Drainage Plan.

Timeline/Implementation Schedule:

Baseline- The City has a Drainage Plan that forecasts storm water management needs for the areas that are likely to develop in the future.

2007-2011 Annually review the Drainage Plan and amend if necessary.

Specific Components and Notes:

Resources Needed

- Staff time to review plans to ensure the guidelines of the master plan are being followed.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of drainage plan amendments (DPA)

2008: DPA = _____ 2009: DPA = _____

2010: DPA = _____ 2011: DPA = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 5-POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Unique BMP Identification Number: 5b-1 (Permit Section V.G.5.b)

BMP Title: **REGULATORY MECHANISM TO ADDRESS POST CONSTRUCTION RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT**

Target Audience: Developers, Contractors, Property Owners

BMP Description:

At the start of the City's MS4 SWPPP planning, the City did not have any ordinances that address post construction runoff. The City intends to draft an ordinance to address this issue during 2007 and adopt the ordinance for implementation before the start of the 2008 construction season.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of public comments received on ordinance changes.
- # of attendees at the public hearing.

Timeline/Implementation Schedule:

Baseline- The City does not have any ordinances related to this issue.

2007 – Draft a new ordinance or amend the existing ones to include post-construction issues.

2008 – Adopt changes to the City Code prior to the 2008 construction season.

2009-2011 – Annually review ordinance(s) and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to research and draft ordinance (or amendments).
- Staff time to educate the City Council and target audience members about proposed changes.
- Staff time to conduct public hearing, review and respond to comments, and work toward adoption of the ordinance.

Recordkeeping & Reporting:

of public comments received on ordinance changes (PC)

of people in attendance at public hearing (PA)

2007 - 2008:

PC = _____

PA = _____

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: 5-POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Unique BMP Identification Number: 5c-1 (Permit Section V.G.5.c)

BMP Title: LONG-TERM OPERATION AND MAINTENANCE OF BMPS																												
Target Audience: City Staff and Private BMP Owners																												
BMP Description: <p><u>For publicly-owned BMPs:</u> Create a database of all BMPs within city limits that includes information about the type of BMP, the location, inspection dates, conditions at time of inspection, and maintenance notes. Establish and implement a preventive maintenance schedule for all BMP structures and track progress using a "work order" procedure.</p> <p><u>For privately-owned BMPs:</u> Create a database of all privately-owned BMPs within the city limits. Provide information to the owner of the BMP regarding effective maintenance techniques.</p>																												
Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.																												
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none"> • On-time completion of tasks listed in the implementation schedule. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none"> • # of BMPs inventoried in the database • # of annual inspections completely annually • # of work orders processed annually 																												
Timeline/Implementation Schedule: <p>Baseline- The City does not have a complete database that inventories BMPs within the city limits.</p> <p>2007- Create a database of publicly-owned BMPs as described above.</p> <p>2008- Establish a maintenance schedule for the in-place BMPs.</p> <p>2009- Create a database of privately-owned BMPs.</p> <p>2010- Educate private owners of BMPs of proper maintenance techniques.</p> <p>2011- Annually review policies and procedures and amend if necessary.</p>																												
Specific Components and Notes: <p>Resources Needed: A database management system capable of producing work orders and tracking maintenance; staff time to build and maintain database; and staff time, training, and equipment to perform proper maintenance of BMPs.</p>	<table border="1"> <tr> <th colspan="3">Recordkeeping & Reporting:</th> </tr> <tr> <td># of BMPs inventoried (BMP)</td> <td></td> <td></td> </tr> <tr> <td># of inspections (I)</td> <td></td> <td></td> </tr> <tr> <td># of work orders (WO)</td> <td></td> <td></td> </tr> <tr> <td>2007: BMP = _____</td> <td>I = _____</td> <td>WO = _____</td> </tr> <tr> <td>2008: BMP = _____</td> <td>I = _____</td> <td>WO = _____</td> </tr> <tr> <td>2009: BMP = _____</td> <td>I = _____</td> <td>WO = _____</td> </tr> <tr> <td>2010: BMP = _____</td> <td>I = _____</td> <td>WO = _____</td> </tr> <tr> <td>2011: BMP = _____</td> <td>I = _____</td> <td>WO = _____</td> </tr> </table>	Recordkeeping & Reporting:			# of BMPs inventoried (BMP)			# of inspections (I)			# of work orders (WO)			2007: BMP = _____	I = _____	WO = _____	2008: BMP = _____	I = _____	WO = _____	2009: BMP = _____	I = _____	WO = _____	2010: BMP = _____	I = _____	WO = _____	2011: BMP = _____	I = _____	WO = _____
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2007: BMP = _____	I = _____	WO = _____																										
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2009: BMP = _____	I = _____	WO = _____																										
2010: BMP = _____	I = _____	WO = _____																										
2011: BMP = _____	I = _____	WO = _____																										
Responsible Party for this BMP: <p>Name: Emily Javens, PE, CPESC</p> <p>Department: Engineering</p> <p>Phone: (507) 387-8643</p> <p>E-mail: stormwater@city.mankato.mn.us</p>																												

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6a-1 (Permit Section V.G.6.a)

BMP Title: **MUNICIPAL OPERATIONS & MAINTENANCE PROGRAM**

Target Audience: City Departments

BMP Description:

A long term operation and maintenance program is necessary to minimize the discharge of pollutants from our MS4 outfalls. Since the operation and maintenance program reaches across multiple departments, it was determined that there needed to be a clear line of authority and responsibility for compliance with this SWPPP. Components in this SWPPP relating to operation and maintenance will be reported to one central contact person that will oversee progress and offer assistance as needed.

More specific details regarding each BMP can be found on the following BMP Sheets:

- Street Sweeping - BMP 6a-2.
- Maintenance of the storm drain system (pipes, catch basins, manholes, outfalls) – BMP 6b-2.
- Maintenance of the detention ponds, infiltration basins, etc – BMP 6b-3, BMP 6b-4.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks listed in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of operation and maintenance procedures reported to the SWPPP Coordinator listed below.

Timeline/Implementation Schedule:

Baseline- The City does not have a central contact for recording all of the operation and maintenance operations.
2007- Touch base with the responsible parties that are responsible for the above referenced BMP sheets on a quarterly basis Create a database of publicly-owned BMPs as described above.
2008-2011 Annually review policies and procedures and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to oversee BMP.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of reported O&M procedures (OM)

2008: OM = _____ 2009: OM = _____

2010: OM = _____ 2011: OM = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6a-2 (Permit Section V.G.6.a)

BMP Title: **STREET SWEEPING**

BMP Description:

The City of Mankato's Street Sweeping Program's objective is to remove sediment, leaves, litter, and other debris from the City's streets to improve the efficiency of the storm water collection system and to enhance the appearance of the public roadway. The City owns and operates 2 mechanical broom sweepers, an *Elgin Pelican*, and an *Elgin Eagle*, the city also owns an *Elgin Whirlwind* vacuum sweeper.

The City of Mankato's street maintenance staff targets the completion of three full sweep cycles. The annual sweeping cycle usually begins in the spring. A full-city sweep is conducted to remove sediment and litter that have accumulated over the winter. Sweeping continues throughout the summer primarily to collect litter on an area by area rotation, but also is targeted in response to complaints and known chronic problem areas, such as certain industrial areas and in areas that serve as sediment and debris collection points.(e.g., the bottoms of hills). Due to the variety of tree species and density of trees, fall sweeping (leaf pick-up) necessitates multiple cycles in multiple areas to collect leaves. When temperatures permit, sand is swept from streets during the winter months.

Additionally, the Maintenance staff sweeps the central business district once per week (when temperatures are above freezing) due to the intensity of traffic (and braking) and concentrated pedestrian use. Finally, sweepers are used during the grind/mill/overlay process of road rehabilitation. After the grinding and milling phases are completed, the area is swept first by the mechanical sweeper and second by the vacuum sweeper to collect the residual coarse and fine material.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

- 1) Number of tons of material removed each year.

Timeline/Implementation Schedule:

- 1) 2007-2011 Continue current system of street sweeping which includes training, storage, disposal and scheduling of sweeping.
- 2) 2007-2011 Continue to evaluate street sweeping research and equipment upgrades as information becomes readily available.

Specific Components and Notes:

- 1) Materials collected from street sweeping operations are stockpiled on site until a sufficient amount has collected for transport to the Blue Earth County Landfill where it is used as daily cover material.
- 2) Materials recovered from the milling operations are recycled as screened aggregate or used in RAP asphalt mix designs.
- 3) Leaves are recycled and used in Mankato's parks or transported to a compost site.
- 4) Street Division Annual Report "Street Cleaning Program"

Responsible Party for this BMP:

Name: Charles Thomas
Department: Public Works – Street Division
Phone: (507)387-8689
E-mail: cthomas@city.mankato.mn.us

Recordkeeping & Reporting:

of tons of material removed (TMR)
2007: TMR = _____ 2008: TMR = _____
2009: TMR = _____ 2010: TMR = _____
2010: TMR = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6b-2 (Permit Section V.G.6.b.2)

BMP Title: **ANNUAL INSPECTION OF ALL STRUCTURAL POLLUTION CONTROL DEVICES**

Target Audience: City Departments

BMP Description:

The City has relatively few structural pollution control devices and inspects all of them annually. The City will annually update the inventory and add any new structures to the inspection schedule. Work orders will be recorded for any maintenance that needs to be done on the inspected structures.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of annual inspections performed.
- # of work orders processed.

Timeline/Implementation Schedule:

2007-11 Maintain annual inspections.

2007-11 Update inventory annually.

Specific Components and Notes:

Resources Needed: Staff time to inspect and maintain structures.

Note: May want to consider using digital photography to document structure conditions.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of annual inspections (AI)
of work orders (WO)

2007: AI = _____ WO = _____

2008: AI = _____ WO = _____

2009: AI = _____ WO = _____

2010: AI = _____ WO = _____

2011: AI = _____ WO = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6b-3 (Permit Section V.G.6.b.3)

BMP Title: **INSPECTION OF A MINIMUM OF 20 PERCENT OF THE MS4 OUTFALLS, SEDIMENT BASINS AND PONDS EACH YEAR ON A ROTATING BASIS**

BMP Description:

- Inspect 20% of all outfalls.
- Initiate appropriate maintenance.
- All inspections include digital photographs to be included in the database.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of outfalls inspected each year
- # of sediment basins and ponds inspected each year
- # of work orders processed each year for outfalls and sediment basins

Timeline/Implementation Schedule:

2007 Identify locations of all outfalls requiring inspection & develop a schedule
2008-11 Conduct the inspections and initiate work order process

Specific Components and Notes:

Resources Needed: Staff time to annually inspect and maintain outfalls and basins and update inventory.

Recordkeeping & Reporting:

of outfall inspections (OF)

of sediment basin inspections (SB)

of work orders (WO)

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

2007: OF = _____ SB = _____ WO = _____

2008: OF = _____ SB = _____ WO = _____

2009: OF = _____ SB = _____ WO = _____

2010: OF = _____ SB = _____ WO = _____

2011: OF = _____ SB = _____ WO = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6b-4 (Permit Section V.G.6.b.4)

BMP Title: **ANNUAL INSPECTION OF ALL EXPOSED STOCKPILE, STORAGE AND MATERIAL HANDLING AREAS**

BMP Description:

Every department is required to inspect all exposed stockpile, storage and material handling areas at least annually. During the first year of the permit, the MS4 Coordinator will inventory the inspections that will be required by each department. Each department head will be notified that the inspection results must be reported to the MS4 Coordinator on an annual basis.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of stockpile and storage and handling area inspections

Timeline/Implementation Schedule:

2007 Inventory stockpiles and storage and material handling areas.

2007-2011 Conduct inspections, update inventory, and collect inspection reports.

Specific Components and Notes:

Resources Needed: Staff time to perform inspections.

Staff time to oversee progress of multiple departments.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of inspections (I)

2007: SI = _____ 2008: SI = _____

2009: SI = _____ 2010: SI = _____

2011: SI = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6b-5 (Permit Section V.G.6.b.5)

BMP Title: **INSPECTION FOLLOW-UP INCLUDING THE DETERMINATION OF WHETHER REPAIR, REPLACEMENT, OR MAINTENANCE MEASURES ARE NECESSARY AND THE IMPLEMENTATION OF THE CORRECTIVE MEASURES**

BMP Description:

Each of the following BMP Sheets contains elements outlining procedures to follow after an inspection:

- 3c-1 Illicit Discharge Detection and Elimination
- 5c-1 Long-term Operation and Maintenance of BMPs
- 6a-1 Street Sweeping
- 6b-3 Inspection of MS4 Outfalls, Sediment Basins and Ponds
- 6b-4 Inspection of Exposed Stockpiles, Storage and Material Handling Areas

In general, an inspection record appropriate to the inspection type will be used to document each inspection's findings, after which, work orders will be prepared to address any identified maintenance needs, and completion of the work orders will be tracked. It is the responsibility of the maintenance manager for each department to determine whether general maintenance (e.g. cleaning), repair, or replacement is appropriate based on internal operational and budget criteria. An annual report summarizing the work will be submitted to the MS4 Coordinator listed below. In the event maintenance cannot be performed during the same year a defect is discovered, a repair schedule should be submitted as part of the annual report along with the reason for the delay.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of reports submitted.

Timeline/Implementation Schedule:

2007-2011 Annually submit summary reports to responsible party listed on this BMP Sheet.

2007-2011 Annually review policy and procedures and amend if necessary.

Specific Components and Notes:

Resources Needed: Staff time to process and collect annual reports.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of submitted reports (R)

2007: R= _____ 2008: R= _____

2009: R= _____ 2010: R= _____

2011: R= _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6b-6 (Permit Section V.G.6.b.6)

BMP Title: **RECORD REPORTING AND RETENTION OF ALL INSPECTIONS AND RESPONSES TO THE INSPECTIONS**

BMP Description:

In year one, the MS4 Coordinator listed below will meet with each department to determine the procedures that are used to document inspections and work performed as a result of the inspections. Each department will be required to submit an annual summary of inspections and work order progress.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of departments with reporting responsibilities.

Timeline/Implementation Schedule:

2007 - Meet with each department to identify the process they use to log inspections and maintenance requests.

2007 - Departments submit annual summaries to the responsible party listed on this BMP Sheet.

2008 - Determine if a standardized form would be advantageous to create.

2008-2011 – Departments continue to submit annual summaries of the work accomplished that year.

Specific Components and Notes:

Resources Needed: Staff time to prepare and collect annual reports.

Evaluation adjectives like “excellent, good, poor” should be avoided. Quantitative evaluations based on some measurable feature of the BMP should be employed (cy of material that escaped from the site, etc.)

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of reporting departments (D)

2007: D = _____ 2008: D = _____

2009: D = _____ 2010: D = _____

2011: D = _____

BMP Summary Sheet

MS4 Name: City of Mankato

Minimum Control Measure: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Unique BMP Identification Number: 6b-7 (Permit Section V.G.6.b.7)

BMP Title: **EVALUATION OF INSPECTION FREQUENCY**

BMP Description:

The following inspection schedules will be evaluated and amended if necessary on an annual basis:

- ESC Site Inspections (BMP 4f-1)
- 20% of Outfall Inspections (BMP 6b-3)
- Stockpile Inspections (BMP 6b-4)
- Long-term Operation and Maintenance of BMPs (BMP 5c-1)
- Illicit Discharge Detection and Elimination (BMP 3c-1)

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of modifications made to inspection schedules

Timeline/Implementation Schedule:

2007-2011 Annually review inspection schedules listed above and amend if necessary.

Specific Components and Notes:

Resources Needed: Staff time to evaluate the inspection schedules.

Note: As stated in the permit, "After two years of inspections, if patterns of maintenance become apparent, the frequency of inspections may be adjusted. If maintenance or sediment removal is required as a result of each of the first two annual inspections, the frequency of inspection shall be increased to at least two (2) times annually, or more frequently as needed to prevent carry-over or washout of pollutants from the structures and maximize pollutant removal. If maintenance or sediment removal is not required as a result of both of the first two (2) annual inspections, the frequency may be reduced to once every two (2) years."

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of inspection schedule modifications (M)

2007 (Jan-Dec): M = _____

2008 (Jan-Dec): M = _____

2009 (Jan-Dec): M = _____

2010 (Jan-Dec): M = _____

2011 (Jan-Dec): M = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C1-1 (Permit Sections II.B.4.a and Appendix C Part IX.A)

BMP Title: **DISCHARGES to "WATERS with PROHIBITED DISCHARGES"**

BMP Description:

The City acknowledges this permit does not authorize new or expanded discharges to the prohibited waters listed in Minn. R. 7050.0180 subp. 3, 4 and 5 (Prohibited Waters, DNR Designated Scientific and Natural Areas, and State Designated Wild River Segments) unless the requirements of Part IX.A (Appendix C) are met.

At this time, the City does not discharge directly into and is not upstream of any waters with prohibited discharges.

The list of "Waters with Prohibited Discharges" will be checked annually to ensure that the City remains in compliance with this permit. An electronic map tool available on the MPCA website can search for Prohibited Waters using GIS technology. Click on "Special and Impaired Waters Search" at the following website:

<http://www.pca.state.mn.us/water/stormwater/stormwater-ms4.html>

Note: Minnesota Rule 7050.0180 subp. 3, 4, and 5 can be viewed at <http://www.revisor.leg.state.mn.us/arule/7050/0180.html>

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of discharge points that discharge directly into or are located upstream of "Waters with Prohibited Discharges."

Timeline/Implementation Schedule:

Baseline – The City does not discharge directly into and is not located upstream of any "Waters with Prohibited Discharges."

2008 – 2011 Annually check the list of "Waters with Prohibited Discharges" for updates.

Specific Components and Notes:

Resources Needed:

- Minimal staff time to check the list for updates.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

of Discharge Points that Discharge directly into or are located upstream of "Waters with Prohibited Discharges"

2007 = 0 (verified by E. Javens on 5/21/07)

2008 =

2009 =

2010 =

2011 =

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C2-1 (Permit Section II.B.4.b and Appendix C Part IX.B)

BMP Title: **DISCHARGES to "WATERS with RESTRICTED DISCHARGES"**

BMP Description:

The City acknowledges that this permit does not authorize new or expanded discharges to the restricted waters listed in Minn. R. 7050.0180 subp. 6, 6a, and 6b (Restricted Waters, Federal or State Designated Scenic or Recreational River Segments, Calcareous Fens) unless the requirements of Part IX.A (Appendix C) are met.

At this time, the City does not discharge directly into and is not upstream of any waters with restricted discharges.

The list of "Waters with Restricted Discharges" will be checked annually to ensure that the City remains in compliance with this permit. An electronic map tool available on the MPCA website can search for Restricted Waters using GIS technology. Click on "Special and Impaired Waters Search" at the following website:

<http://www.pca.state.mn.us/water/stormwater/stormwater-ms4.html>

Note: Minn. R. 7050.0180 subp. 6, 6a, and 6b can be viewed at <http://www.revisor.leg.state.mn.us/arule/7050/0180.html>

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of discharge points that discharge directly into or are located upstream of "Waters with Restricted Discharges."

Timeline/Implementation Schedule:

Baseline – There are no discharge points that discharge directly into or are located upstream of "Waters with Restricted Discharges."

2008 – 2011 Annually check the list of "Waters with Restricted Discharges" for updates.

Specific Components and Notes:

Resources Needed:

- Minimal staff time to check the list.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

of Discharge Points that discharge into or are located upstream of "Waters with Restricted Discharges"

2007 = 0 (verified by E. Javens on 5/21/07)

2008 =

2009 =

2010 =

2011 =

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C3-1 (Permit Section II.B.4.c and Appendix C Part IX.C)

BMP Title: **DISCHARGES to TROUT WATERS**

BMP Description:

The City acknowledges that this permit does not authorize new or expanded discharges to trout waters listed in Minn. R. 6264.0050 subp. 2 and 4 unless the requirements of Part IX.C (Appendix C) are met.

At this time, the City does not discharge directly into and is not upstream of any trout waters.

The list of Trout Waters will be checked annually to ensure that the City remains in compliance with this permit. An electronic map tool available on the MPCA website can search for Trout Waters using GIS technology. Click on "Special and Impaired Waters Search" at the following website:

<http://www.pca.state.mn.us/water/stormwater/stormwater-ms4.html>

Note: Minn. R. 7050.0180 subp. 2 and 4 can be viewed at <http://www.revisor.leg.state.mn.us/arule/6264/0050.html>

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of discharge points that discharge directly into or are upstream of any "Trout Waters."

Timeline/Implementation Schedule:

Baseline – There are no discharge points that discharge directly into or are located upstream of any "Trout Waters."
2008 – 2011 Annually check the list of "Trout Waters" for updates.

Specific Components and Notes:

Resources Needed:

- Minimal staff time to check the list.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting

of Discharge Points that Discharge into or are upstream of "Trout Waters"

2007 = 0 (verified by E. Javens on 5/21/07)

2008 =

2009 =

2010 =

2011 =

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C4-1

BMP Title: **DISCHARGES to WETLANDS**

BMP Description:

The City acknowledges as stated in the permit, "this permit does not authorize physical alterations to wetlands, or other discharge adversely affecting wetlands, if the alteration will have a significant adverse impact to the designated uses of a wetland. Any physical alterations to wetlands that will cause a potential for a significant adverse impact to a designated use must be implemented in accordance with the avoidance, minimization and mitigation requirements of Minn R.7050.0186 and other applicable rules."

During the first year of this permit, the City will identify any wetlands that receive MS4 discharges, if any, and clearly narrate the procedures the City employs to protect its wetlands.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of discharge points to wetlands.
- # of wetland delineations submitted to the City for review.

Timeline/Implementation Schedule:

2007 – The City will identify and map the wetlands that receive MS4 discharges.

2007 – The City will clearly narrate the policies and procedures it employs to protect its wetlands.

2008 – 2011 Annually review BMP and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to research the policies and procedures utilized by the City to protect its wetlands.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of wetland discharge points (DPW)

of wetland delineations reviewed (DEL)

2007 (Jan – Dec): DP = _____ DEL = _____

2008 (Jan – Dec): DP = _____ DEL = _____

2009 (Jan – Dec): DP = _____ DEL = _____

2010 (Jan – Dec): DP = _____ DEL = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C5-1

BMP Title: DISCHARGES REQUIRING ENVIRONMENTAL REVIEW	
BMP Description: <p>The City acknowledges that as stated in the permit “this permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act (Minn. Stat. Ch. 116D), the National Environmental Policy Act (42 U.S.C §§ 4321 – 4370 f) and rules implementing those laws. Any environmental review documents such as environmental assess worksheets, environmental impact statements, or environmental assessments, must be completed in accordance with those requirements.”</p> <p>During the first year of this permit, the City will clearly narrate the procedures the City employs when the discharge requires environmental review.</p> <p>Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.</p>	
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none">• # of environmental reviews considered by the City annually.	
Timeline/Implementation Schedule: <p>2007 – The City will clearly narrate the procedures utilized by the City when discharges require environmental review.</p> <p>2008 – 2011 Annually review the BMP and amend if necessary.</p>	
Specific Components and Notes: <p>Resources Needed:</p> <ul style="list-style-type: none">• Staff time to research the policies and procedures associated with environmental review.	Recordkeeping & Reporting: <p># of environmental reviews considered by the City (ER)</p> <p>2007 (Jan – Dec): ER = _____</p> <p>2008 (Jan – Dec): ER = _____</p> <p>2009 (Jan – Dec): ER = _____</p> <p>2010 (Jan – Dec): ER = _____</p>
Responsible Party for this BMP: <p>Name: Emily Javens, PE, CPESC</p> <p>Department: Engineering</p> <p>Phone: (507) 387-8643</p> <p>E-mail: stormwater@city.mankato.mn.us</p>	

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C6-1

BMP Title: **DISCHARGES AFFECTING THREATENED or ENDANGERED SPECIES or THEIR HABITAT**

BMP Description:

The City acknowledges that as stated in the permit, "This permit does not replace or satisfy any review requirements for Threatened or Endangered Species, from discharges whose direct, indirect, interrelated, interconnected, or independent impacts would jeopardize a listed Threatened or Endangered Species or adversely modify a designated critical habitat. For any project resulting in a discharge having the potential to adversely impact Threatened or Endangered Species, or their critical habitat, You must conduct your required review and coordination with appropriate agencies in accordance with those requirements."

During the first year of this permit, the City will clearly narrate the procedures the City employs when a discharge may affect threatened or endangered species or their habitat.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of endangered or threatened species reported in the city limits of Mankato.

Timeline/Implementation Schedule:

2007 – Investigate threatened or endangered species in the city limits of Mankato.

2007 – Map areas known to have threatened or endangered species.

2008 – 2011 Annually update list as necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to research threatened and endangered species within the city limits of Mankato.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of threatened or endangered species within the city limits of Mankato (ES)

June 2007 – June 2008: ES = _____

June 2008 – June 2009: ES = _____

June 2009 – June 2010: ES = _____

June 2010 – June 2011: ES = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C7-1

BMP Title: **DISCHARGES AFFECTING HISTORIC or ARCHEOLOGICAL SITES**

BMP Description:

The City acknowledges that as stated in the permit, "this permit does not replace or satisfy any review requirements for Historic or Archaeological Sites from discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or adversely affecting known or discovered archaeological sites. For any project resulting in a discharge having the potential to adversely impact Historic or Archaeological Sites, including significant anthropological sites and any burial sites, You must conduct your required review and coordination with the Minnesota State Historic Preservation Officer or other appropriate agencies in accordance with those requirements."

The following sites have been identified in Mankato or the immediate surrounding area:

- Blue Earth County Courthouse
- J.R. Brandup House, 704 Byron (Also known as the William Steil House)
- Charles Chapman House, 418 McCauley
- Cray Mansion, 603 South 2nd Street
- Adolph O. Eberhart House, 228 Clark Street
- Federal Courthouse and Post Office, 401 South 2nd Street
- First National Bank of Mankato, 229 South Front Street
- First Presbyterian Church, corner of Hickory and South Broad Streets
- Renesselaer D Hubbard House, 606 South Broad Street
- William Irving House, 320 Park Lane
- Adam Jefferson House, Cleveland Street
- Kennedy Bridge, Twp Rd 167 over LeSueur River (Also known as the Hungry Hollow Bridge)
- Kern Bridge, Twp Rd over LeSueur River, near Skyline (Also known as the Yaeger Bridge)
- Lincoln Park Residential Historic District, roughly bounded by Shaubut, Record, Pleasant, 2nd, Parsons, Lock and Bradley Streets, Grace and Wickersham Courts
- Mankato Holstein Farm Barn, Co. Hwy 5
- Mankato Public Library and Reading Room, 120 South Broad Street
- Mankato Union Depot, 112 Pike Street
- North Front Street Commercial District, 301-415 North Riverfront Drive
- Old Main, Mankato State Teachers College, 5th and Jackson Streets
- Oscar Schmidt House, 111 Park Lane (Also known as the YMCA)

The City will map the historic sites identified to more easily identify when a discharge may affect one of these sites. Annually, the list should be checked to determine if any additional sites should be added.

<http://www.nationalregisterofhistoricplaces.com/mn/Blue+Earth/state.html>

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of historic sites.
- # of archaeological sites.
- # of mapped historic and archaeological sites.

Timeline/Implementation Schedule:

2007 – Map the historic sites.

2007 – Research and map archaeological sites

2008 – 2011 Annually update list and review and amend BMP if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to research and map archaeological sites.
- Staff time to map historic sites.
- Staff time to update lists.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of historic sites (HS)

of archaeological sites (AS)

of mapped sites (MS)

2008: HS = _____ AS = _____ MS = _____

2009: HS = _____ AS = _____ MS = _____

2010: HS = _____ AS = _____ MS = _____

2011: HS = _____ AS = _____ MS = _____

Note: 2008 = June 2007 – June 2008; 2009 = June 2008 – June 2009

BMP Summary Sheet

MS4 Name: City of Mankato, MN

Appendix C Compliance Measure: DISCHARGES WITH LIMITATIONS ON COVERAGE

Unique BMP Identification Number: C8-1

BMP Title: **DISCHARGES AFFECTING SOURCE WATER PROTECTION AREAS**

BMP Description:

The City acknowledges that as stated in the permit, "You shall incorporate BMPs into your Storm Water Pollution Prevention Program to protect any of the following drinking water sources that your MS4 discharges may affect, and You shall include the map of these sources with the Storm Water Pollution Prevention Program if they have been mapped:

1. Wells and source waters for drinking water supply management areas identified as vulnerable under Minn R. 4720.5205, 4720.5210, and 4720.5330, and
2. Source water protection areas for surface intakes identified in the source water assessments conducted by or for the Minnesota Department of Health under the federal Safe Drinking Water Act, U.S.C §§ 300j – 13."

The City has not had a drinking water supply management area defined as of this time. A source water assessment was done in May 2003 and can be found at <http://mdh-agua.health.state.mn.us/swa/surfwaterFile/1070009.pdf>

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of discharge points located in the inner emergency response area

Timeline/Implementation Schedule:

2007 – Identify discharge points located in the inner emergency response area.

2008 – 2011 Annually review BMP and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to research discharge points in the inner emergency response area.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of discharge points located within the inner emergency response area (DP)

2007 (Jan – Dec): DP = _____

2008 (Jan – Dec): DP = _____

2009 (Jan – Dec): DP = _____

2010 (Jan – Dec): DP = _____

LOWER MINNESOTA RIVER DISSOLVED OXYGEN TMDL

BACKGROUND

The Environmental Protection Agency of the United States, through Section 303d of the Clean Water Act, requires states to develop Total Maximum Daily Loads (TMDLs) for water bodies not meeting water quality standards. The purpose of a TMDL is to determine an allowable loading of a pollutant into a water body. The lower Minnesota River is currently impaired for dissolved oxygen during periods of low flow. Too much phosphorus entering the river has been determined to be the cause of the impairment. To bring the water body back to meeting water quality standards, many sectors will need to make reductions in the amount of phosphorus that is discharged into the lower Minnesota River. The City of Mankato, along with other cities will be required to reduce phosphorus concentrations from its storm drain effluent 30% by the year 2025.

GENERAL STRATEGY

The phosphorus reductions needed by MS4s will be calculated through engineering calculations rather than testing the actual water leaving the pipes. The reduction will be compared to conditions that would have been present in the year 2000. The assumption is made that no BMPs were in place at that time. During this permit cycle, the City will first identify all BMPs impacting the reduction of phosphorus. Next, using formulas and assumptions, reductions will be calculated for each BMP. Once the calculations are complete for the existing conditions, the City will need to develop a plan to complete the remaining reduction. It is possible, but not likely, the City has implemented enough BMPs to meet its reduction. If not, the City has a variety of options to meet the reduction. The City could retrofit existing districts with structural BMPs or may build new BMPs in new districts. Non-structural BMPs, such as street sweeping or leaf pick-up, are also an option. Verification monitoring may be required once the City believes it has met the required phosphorus reduction. It will likely take multiple permit cycles before this process is complete.

NEEDS ANALYSIS

The MPCA has created a checklist to determine the degree of needs required to implement the TMDL into an MS4 SWPPP. The assessment for Mankato pointed out that additional funding, staffing, and strong regulatory tools would be three of the greatest needs. The checklist immediately follows this narrative. The BMP sheets that follow outline the additional measures the City will take to meet the conditions of this TMDL. The BMP sheets follow the organization laid out by the guidance produced by the MPCA for this TMDL.

TMDL Implementation Checklist for Mankato's MS4 SWPPP

This checklist is used to help determine if an MS4's stormwater program can achieve the broad strategy, pollutant tracking, and general schedule required by the TMDL. Answer the questions in each section to determine if the SWPPP is sufficient to meet the needs of the TMDL.

2.1 STORMWATER PROGRAM STRUCTURE		Yes/No	Comments
a. Do you know in what department the stormwater program will be housed?		Yes	Program is housed in the Engineering Dept.
b. Are stormwater activities being conducted through the program?		Yes	Program is progressing as planned.
c. Have staff been defined for administering each function of the program?		Yes	Assignments defined on the BMP sheets.
d. Has the level of funding needed to staff each program been determined?		No	To be addressed in Year 1.
e. Are there other requirements the city has related to stormwater?		No	
f. Are there other organizations with overlapping or related responsibilities?		Yes	State MPCA - NPDES Program
Is Mankato's stormwater program structured to meet the requirements of the Lower MN River Dissolved Oxygen TMDL?		NO	See BMP Sheets for planned corrective actions.
2.2 TECHNICAL RESOURCES		Yes/No	Comments
a. Will you require and do you have a Geographic Information Systems (GIS)?		Yes	GPS data collection in its infancy.
b. Will you require and do you have a database management system?		Yes	Will use Excel spreadsheets.
c. Will you require and do you have modeling resources?		No	Not at this time.
d. Are other resources needed (including necessary staff)?		Yes	People, Time, and Money
Does Mankato have the needed technical resources to meet the requirements of the Lower MN River Dissolved Oxygen TMDL?		NO	See BMP Sheets for planned corrective actions.
2.3 REGULATORY TOOLS		Yes/No	Comments
a. Will you need more authority through building codes, easements, or ownerships?		Likely	Will be determined as program progresses.
b. Will you need more authority on development issues? (e.g. input on plat review)		Likely	Will be determined as program progresses.
c. Will you need additional ordinances? (e.g. to implement Low Impact Development)		Likely	Will be determined as program progresses.
Does Mankato have the needed regulatory tools to meet the requirements of the Lower MN River Dissolved Oxygen TMDL?		NO	See BMP Sheets for planned corrective actions.
2.4 FUNDING MECHANISMS		Yes/No	Comments
a. Do you have a stable funding source dedicated to stormwater management?		Yes	Stormwater utility fee is in place.
b. Can stormwater funds be used to implement actions outlined in your strategy?		Yes	
c. Are the sources of funding adequate to cover program costs?		No	
Does Mankato have the needed funding mechanisms to meet the requirements of the Lower MN River Dissolved Oxygen TMDL?		NO	See BMP Sheets for planned corrective actions.

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P1-1 (Permit Section IV.D)

BMP Title: **MAP WATERSHEDS FOR ALL DISCHARGE POINTS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“1.1 The stormwater general permit requires identification of outfalls, conveyances 24 inches or greater in diameter, DNR subwatersheds (see <http://gisdmnspl.cr.usgs.gov/watershed/index.htm>), wetlands, and structural pollution control devices. To meet the conditions of a TMDL, greater detail will be required. The greater the detail that can be achieved in mapping discharges, the greater will be the flexibility in implementing BMPs to meet the reduction requirement. We thus recommend **identifying and mapping discharge points, watersheds contributing to discharge points, and within each watershed, mapping the conveyance system**. The conveyance system includes all below ground (e.g. pipes) and above ground (e.g. curb and gutter systems, ditches), conveyances.”

Currently, the City has a watershed map that delineates major discharge points and a schematic map for most storm drain pipes. During this permit cycle, the goal is map watersheds for all discharge points and to model the storm drain system in StormCad.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of discharge points identified and mapped.
- # of delineated watersheds linked to discharge points.
- # of pipes modeled in StormCad

Timeline/Implementation Schedule:

Baseline – The City has mapped the watersheds that contribute to major discharge points. Most storm drain pipes have schematically been drawn in AutoCad, but none of the pipes have been modeled in StormCad. Above ground conveyances have not been mapped.

2007 – List the discharge points in each watershed delineated in the Mankato Drainage Plan and its addendums.

2008 – Attach GPS data to discharge points.

2009 – 2010 Model storm pipes in StormCad.

2007 – 2011 Annually update maps. Annually review BMP and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to inventory discharge points.
- Gather GPS data for discharge points.
- Staff time to build the StormCad model.
- Staff time to update maps.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of discharge points (DP)

of watersheds delineated (WS)

of pipes modeled in StormCad (PM)

2007: DP = _____ WS = _____ PM = _____

2008: DP = _____ WS = _____ PM = _____

2009: DP = _____ WS = _____ PM = _____

2010: DP = _____ WS = _____ PM = _____

2011: DP = _____ WS = _____ PM = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P1-2 (Permit Section IV.D)

BMP Title: **MAP PHOSPHORUS CONTRIBUTING FACTORS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“1.2 Identify and map factors useful in identifying potential phosphorus contributions. These include percent impervious surface (using Landsat imagery), land use (e.g. commercial, residential, industrial, park), and soil type (sand, clay). The greater the detail that can be achieved in mapping these, the greater will be the flexibility in implementing BMPs to meet the reduction requirement.”

The following maps will be useful when calculating the phosphorus reductions described in BMP Sheet P1-4:

- Land Use Map – The City has an up-to-date land use map.
- Percent Impervious Map – The City does not have a map illustrating percent impervious. One will be created using assumptions about land use obtained from the zoning map.
- Soil Type Map – The City does not have a soils map; however the information is available through the Blue Earth County Soil Survey. The County is planning to make the information available electronically in the near future.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- Annually updating the list of maps and keeping the maps current.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of the different types of maps on file that are useful for calculating phosphorus reductions

Timeline/Implementation Schedule:

Baseline – The City maintains an electronic land use map. Soil types are not electronically mapped; they are referenced for design purposes from the Blue Earth County Soil Survey. The City does not map impervious surfaces.

2007 – Download an electronic version of the Blue Earth County Soil Survey if available. If not, annually check for availability.

2008 – Create an Impervious Surface Map.

2007 – 2011 Annually update maps.

Specific Components and Notes:

Resources Needed:

- Staff time to create and update maps.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: Updated on: ___ / ___ / 07; # of Maps = ___
2008: Updated on: ___ / ___ / 08; # of Maps = ___
2009: Updated on: ___ / ___ / 09; # of Maps = ___
2010: Updated on: ___ / ___ / 10; # of Maps = ___
2011: Updated on: ___ / ___ / 11; # of Maps = ___

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P1-3 (Permit Section IV.D)

BMP Title: **CALCULATE ADJUSTED LOAD REDUCTION**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“1.3 Identify and map your current and year 2000 urban footprint. Aerial photos and satellite imagery will be useful for identifying the 2000 footprint. To the extent practical, identify and map future land use. The following link identifies projected population growth over the next 20 years and may be useful in identifying future expansion of your community (<http://www.demography.state.mn.us/a2z.html#Population%20forecasting>). **The calculated load will need to be adjusted to account for differences between current and future land use compared to the 2000 footprint.** In a situation where the current or future urban footprint is greater than the 2000 footprint, the required phosphorus reduction will be more than 30 percent.”

According to the US Census Bureau, the population of Mankato in the year 2000 was 32,477.

The population forecast for the year 2025 from the website address listed above is 35,220.

This difference represents an increase of 8.5%.

Also according to the US Census Bureau, the Mankato footprint for the year 2000 was 15 square miles.

Assuming population grows at the same rate as the urban footprint, the urban footprint will grow 8.5% by 2025.

The adjusted load reduction can be calculated using the following formula:

$$\text{Adjusted Load Reduction} = [1 - (0.7 / (1 + \text{Population Increase}))] * 100$$

$$\text{Adjusted Load Reduction} = [1 - (0.7 / 1.085)] * 100 = 35.5 \%$$

Therefore, the required load reduction for Mankato is 35.5%.

In the event the 2025 forecast should change, the required load reduction will need to be adjusted.

The assumption that population changes at the same rate as the urban footprint should be tested after the next census. If the assumption is found to be false, the loading adjustment will need to be recalculated.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The work for this BMP is essentially done. If updated census information should become available, the calculation for the required load reduction will need to be recalculated.

Timeline/Implementation Schedule:

Baseline – The required load reduction has been calculated.

2007 – 2011 Annually check for updated census information and adjust the required load reduction as necessary.

Specific Components and Notes:

US Census Bureau facts for Mankato can be found at the following website:
<http://quickfacts.census.gov/qfd/states/27/2739878.html>.

Recordkeeping & Reporting:

2007 Load Reduction = 35.5%

2008 Load Reduction = _____

2009 Load Reduction = _____

2010 Load Reduction = _____

2011 Load Reduction = _____

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P1-4 (Permit Section IV.D)

BMP Title: **MAP EXISTING BMPs and CALCULATE REDUCTIONS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“1.4 The stormwater general permit requires identification of BMPs as they relate to the six minimum control measures. We recommend **mapping existing BMPs and calculating phosphorus reductions associated with these BMPs**. These include structural (e.g. infiltration ponds, biofiltration systems, etc.) and non-structural (e.g. street sweeping) BMPs.

1.4.1 Identify and map the BMPs and map watershed areas contributing to the BMPs.

1.4.2 Estimate reductions associated with the BMPs. For example, in the Minnesota Stormwater Manual (Table 7.4) average total phosphorus removal from vegetation filtration is given as 65% while a value of 50% is given for wet ponds. The Minnesota Stormwater Manual contains some of this information, but MPCA is compiling additional data on efficiencies of BMPs for reduction phosphorus loading from storm water.

1.4.3 Calculate reductions associated with the existing BMPs. For example, if 10% (0.1) of stormwater from an MS4 is treated using wet ponds, and an average value of 50% (0.5) phosphorus removal is given to wet ponds, then wet ponds have achieved a 5% (0.1*0.50) overall reduction in phosphorus loading.

1.4.4 Note that in the case of BMP sequencing, reductions are not additive. For example, two BMPs in one area that work in series and each achieve a 50 percent phosphorus reduction do not provide a 100 percent phosphorus reduction.”

The City will map existing BMPs and calculate the phosphorus reductions for each BMP using values provided by the Minnesota Storm Water Manual or the MPCA. The data will be tracked in an Excel spreadsheet.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of BMPs identified.
- % phosphorus reductions earned.

Timeline/Implementation Schedule:

Baseline – The City has mapped the watersheds associated with major discharge points, but not for individual BMPs.

2007 – Identify existing BMPs that qualify for a phosphorus reduction.

2008 – Delineate the (smaller) watersheds associated with each BMP.

2009 – Calculate phosphorus reductions.

2010 – Set reduction goals for each permit cycle up to the 2025 deadline.

2007 – 2011 Annually update the list of BMPs, delineate watersheds, and calculate phosphorus reductions.

Specific Components and Notes:

Resources Needed:

- Staff time to identify BMPs and delineate watersheds.
- Staff time to calculate reductions.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of BMPs Identified (BMP)

% phosphorus reductions earned (%P)

2007: BMP = _____ %P = _____

2008: BMP = _____ %P = _____

2009: BMP = _____ %P = _____

2010: BMP = _____ %P = _____

2011: BMP = _____ %P = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

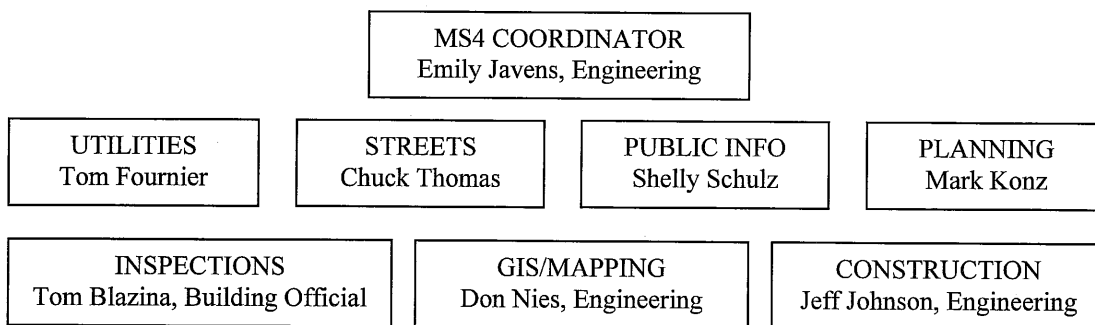
Unique BMP Identification Number: P2-1 (Permit Section IV.D)

BMP Title: **LIST CITY STAFF WITH STORM WATER RESPONSIBILITIES**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“2.1 List city entities that have functions or requirements associated with storm water management. Identify all city operations and determine their relationship to general municipal operations and storm water management. For example, the City of New Ulm has three departments that may interact on stormwater issues – Administration, which works with finance and community development; Engineering and Inspections, which works with permits, zoning and community development; and Public Works, which works with street and sewer maintenance.”

The following staff positions have been identified throughout this plan with direct BMP responsibilities:



City Staff with less direct responsibilities associated with storm water management include the following:

Elected or Appointed Positions

Mayor, City Council, and City Manager – Field questions from citizens.

Environmental Committee – Annually reviews storm water program and offer comments.

Administrative Support Departments

Information Technology Department – Maintains software needed for SWPPP initiatives.

Legal Department – Assists with the review of proposed ordinances.

Finance Department – Processes fines and distributes stormwater utility fee funds.

Human Resources – Assists with hiring appropriate staff to implement SWPPP initiatives.

Measurable Goals:

The City of Mankato will measure and show effectiveness by annually updating the list as needed.

Timeline/Implementation Schedule:

Baseline – The City has produced the comprehensive list above.

2007 – 2011 Annually review the list and update as necessary.

Specific Components and Notes:

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: Updated on: ___ / ___ / 07

2008: Updated on: ___ / ___ / 08

2009: Updated on: ___ / ___ / 09

2010: Updated on: ___ / ___ / 10

2011: Updated on: ___ / ___ / 11

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-2 (Permit Section IV.D)

BMP Title: **LIST AGENCIES WITH STORM WATER RESPONSIBILITIES**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“List other agencies that have functions or requirements associated with stormwater management. For example, the City of Eden Prairie, in its SWPPP, identifies the Metropolitan Council, MPCA, Hennepin Conservation District, and two watershed districts as entities that have regulatory and non-regulatory responsibilities related to stormwater.”

Regulatory Agencies:

MN Pollution Control Agency

Blue Earth County

Blue Earth County Soil and Water Conservation District (SWCD)

Tony Abrahamson, SWCD Manager, 1160 Victory Dr, Suite 3, Mankato, MN 56001 (507) 345-4744

Nicollet County

Nicollet County Soil and Water Conservation District (SWCD)

Kevin Ostermann, SWCD Manager, 424 S Minnesota Ave, St. Peter, MN 56082 (507) 931-2550

Potential Stormwater Partners:

Blue Earth River Clean Water Partnership

Henry Quade, Water Resources Center, MSU Box 70,

Blue Earth River Team (BERT)

Cathi Fouchi, DNR, 410 Jackson St, Suite 180, Mankato (507) 389-6257

City of Fairmont – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL

City of Marshall – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL (Shane Waterman)

City of Montevideo – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL

City of New Ulm – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL (Steve Koehler)

City of North Mankato – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL (Marion Haayer)

City of Redwood Falls – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL

City of St. Peter – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL (Amy Kamm)

City of Willmar – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL (Mel Odens)

City of Waseca – MS4 Discretionary City with Lower MN Dissolved Oxygen TMDL

League of Minnesota Cities Stormwater Coalition

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by annually updating the list as needed.

Timeline/Implementation Schedule:

Baseline – The City has produced the comprehensive list above.

2007 – 2011 Annually review the list and update as necessary.

Specific Components and Notes: No watershed districts exist in the area.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: Updated on: ___ / ___ / 07

2008: Updated on: ___ / ___ / 08

2009: Updated on: ___ / ___ / 09

2010: Updated on: ___ / ___ / 10

2011: Updated on: ___ / ___ / 11

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-3 (Permit Section IV.D)

BMP Title: **LIST EXISTING WATER RESOURCES PLANNING TOOLS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“List existing water resource planning tools. Examples include drainage plan updates, wetland protection and management plans, local water management plans, and wellhead protection plans.”

Mankato Drainage Plan, Prepared for the City of Mankato, April 1994 by Barr Engineering Company.

Addendums:

Detailed Storm Water Study: Eastern Portion of the Upper Indian Creek Watershed, Prepared for the City of Mankato, June 1997, by Barr Engineering Company.

Detailed Storm Water Study, South Central Portion of North Industrial System, Prepared for the City of Mankato, March 2000, by I&S Engineers and Architects, Inc.

Country Woods Subdivision Drainage Study, Part of Wilson Creek System Northwest, Prepared for the City of Mankato, June 2002, by I&S Engineers and Architects, Inc.

Drainage Study for: Eastern Portion of the Upper Indian Creek Watershed- Revised, Prepared for the City of Mankato, February 2006, by I&S Engineers and Architects, Inc.

Nicholas, Frank. Climate Summary for the Mankato Area, Based on a Quarter Century of Records of the Official Climate Observers January 1, 1955 – June 30, 1979. (Department of Geography, Mankato State University)

Blue Earth County Comprehensive Local Water Plan, 1998. (Note: Blue Earth County is writing a new Water Management Plan. The anticipated completion date is late 2007.)

Nicollet County Comprehensive Water Resources Plan, 1996-2000.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by annually updating the list as needed.

Timeline/Implementation Schedule:

Baseline – The City has produced the comprehensive list above.

2007 – 2011 Annually review the list and update as necessary.

Specific Components and Notes: Mankato does not have a wellhead protection plan as of September 2007.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: Updated On: ___ / ___ / 07

2008: Updated On: ___ / ___ / 08

2009: Updated On: ___ / ___ / 09

2010: Updated On: ___ / ___ / 10

2011: Updated On: ___ / ___ / 11

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-4 (Permit Section IV.D)

BMP Title: **DEVELOP GIS COVERAGES FOR WATERS WITH LIMITATIONS ON COVERAGE**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“The stormwater general permit requires mapping of impervious surfaces for conditions outlined in Appendix C of the general permit (Limitations of Coverage). These include waters with prohibited or restricted discharge, wetlands, trout waters, historic or archaeological sites, threatened or endangered species or associated habitat, and source water protection areas. To meet the conditions of the TMDL, we recommend **developing GIS coverages for all waters associated with Limitations of Coverage.**”

The following categories represent waters associated with Limitations on Coverage:

Special Waters – Streams:	No features found within 2000 feet of city limits.
Special Waters – Lakes:	No features found within 2000 feet of city limits.
Section Containing Calcareous Fen(s):	No features found within 2000 feet of city limits.
Section Containing Trout Stream(s):	No features found within 2000 feet of city limits.
Scientific and Natural Area(s):	No features found within 2000 feet of city limits.

303d-Listed Impairments (2006 Final List):

Impaired Stream:	Minnesota River Section 07020007-502	Pollutant: Fecal Coliform, Mercury, PCBs, Turbidity
Impaired Stream:	Minnesota River Section 07020007-504	Pollutant: Mercury, PCBs
Impaired Stream:	Blue Earth River Section 07020009-501	Pollutant: Fecal Coliform, Mercury, Turbidity
Impaired Lake:	Hiniker Pond, Lake Id:07-0147-00	Pollutant: Mercury

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by annually updating the list as needed.

Timeline/Implementation Schedule:

Baseline – The City does not have a map for discharges with limitations on coverage.
2007 – Create a map illustrating waters with limitations on coverage.
2007 – 2011 Annually update map if changes occur.

Specific Components and Notes:

All stream and lake impairments listed in the 303d list will eventually have TMDL requirements. Early participation in the TMDL process is recommended. The 303d list is updated every 2 years and can be found at <http://proteus.pca.state.mn.us/water/tmdl/tmdl-303dlist.html>

Resources Needed:

- Staff time to create and update map.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC
Department: Engineering
Phone: (507) 387-8643
E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: Updated On: ___ / ___ / 07
2008: Updated On: ___ / ___ / 08
2009: Updated On: ___ / ___ / 09
2010: Updated On: ___ / ___ / 10
2011: Updated On: ___ / ___ / 11

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-5 (Permit Section IV.D)

BMP Title: **IDENTIFY FUTURE TMDLS LIKELY TO IMPACT COMMUNITY**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“Identify and list other TMDLs that may affect your community. For example, a Lake Pepin TMDL may affect communities within the Minnesota River watershed. MPCA’s 2006 list of impaired waters and the current TMDL list will be of value in identifying these water bodies. A GIS-based viewer on MPCA’s website can be used to identify impaired waters www.pca.state.mn.us/data/edaWater/index.cfm. The purpose of identifying other TMDLs is to identify as early as possible the most restrictive TMDL. For example, the Lower Minnesota River Dissolved oxygen TMDL’s phosphorus reduction would be adequate because it has a more restrictive requirement. MPCA understands this is a complicated issue, since it may be difficult to identify or predict future TMDLs. The Minnesota Pollution Control Agency is preparing a list of TMDLs that apply to MS4s and this list can be used to identify TMDLs that potentially affect a community. There are also difficulties in comparing TMDLs that are based on different physical conditions. For example, the Lower Minnesota River Dissolved Oxygen TMDL applies to low flow conditions in the Minnesota River, while the Lake Pepin TMDL is likely to be a year round TMDL. These are issues the MPCA will continue to work through.”

The following TMDLs are expected to impact the City of Mankato:

- Minnesota River TMDL: Turbidity (Target Start to Completion Dates: 2004-2009)
- Minnesota River TMDL: Fecal Coliform, (Target Start to Completion Dates: 2008-2012)
- Lake Pepin Watershed TMDL: Eutrophication and Turbidity Impairments (Target Completion Date: 2009)
- Blue Earth River TMDL: Fecal Coliform, (Target Start to Completion Dates: 2004-2008)
- Blue Earth River TMDL: Turbidity (Target Start to Completion Date: 2004-2009)
- Statewide Mercury Pollutant Reduction TMDL (See Note Below)

The following Impaired Waters will require a TMDL per Section 303 (d) of the Clean Water Act:

- Minnesota River: Mercury (Target Start to Completion Dates: 1999-2011)
- Minnesota River: PCBs (Target Start to Completion Dates: 2002-2015)
- Hiniker Pond: Mercury (Target Start to Completion Dates: 1999-2011)

For more information on Minnesota TMDLs: <http://www.pca.state.mn.us/water/tmdl/index.html>.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals: The City will measure and show effectiveness by annually updating the list as needed.

Timeline/Implementation Schedule: Baseline – The City has identified the future TMDLs likely to impact the area.
2007 – 2011 – Annually update list as necessary.

Specific Components and Notes:

Hiniker Pond (Lake Id #07-0147-00) and the Minnesota River Reach (Reach #0702007-502) from the Blue Earth River to the Shahaska Creek are not included in the Statewide Mercury Reduction TMDL. The Blue Earth River Reach (Reach #07020009-501) from the LeSueur River to the Minnesota River is included in this study. The Impaired Waters that were included in the study were waters that would meet water quality standards after the mercury-reduction goals associated with this study were reached. For more information:

www.pca.state.mn.us/water/tmdl/tmdl-mercuryplan.html.

Recordkeeping & Reporting:

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC
Department: Engineering
Phone: (507) 387-8643
E-mail: stormwater@city.mankato.mn.us

2007: Updated on: ____ / ____ / 07
2008: Updated on: ____ / ____ / 08
2009: Updated on: ____ / ____ / 09
2010: Updated on: ____ / ____ / 10
2011: Updated on: ____ / ____ / 11

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-6 (Permit Section IV.D)

BMP Title: **CREATE A MENU OR MATRIX FOR BMP SELECTION**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“Develop a menu or matrix from which to select BMPs for implementation. For each BMP in this menu, include the information described below. The Minnesota Stormwater Manual provides information useful for completing this menu. MPCA will continue to gather additional information useful to you in completing the menu.

2.6.1 Effectiveness for reducing phosphorus. For example, the Minnesota Stormwater Manual indicates wet ponds, on average, have a phosphorus removal efficiency of 50 percent.

2.6.2 Time to achieve effectiveness, maturity rate and expected life expectancy.

2.6.3 Maintenance requirements. Maintenance includes both structural and non-structural maintenance, and training. An example of structural maintenance is ensuring that an infiltration pond is functioning properly. An example of non-structural maintenance is maintaining a schedule for street sweeping. An example of maintenance for training is ensuring there is on-going training and certification for developers and engineers.

2.6.4 Costs associated with each BMP. These include construction and maintenance costs. Consider both monetary and non-monetary costs. An example of a non-monetary cost is a stormwater pond that could be a drowning hazard or provide mosquito breeding habitat.”

The City will create a matrix as described above. Values for reductions will either come from the Minnesota Stormwater Manual or the MPCA.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of BMPs in selection menu.

Timeline/Implementation Schedule:

Baseline – The City does not have an official list of BMPs that may be used on projects within the city limits.

2007 – 2008 Build a BMP selection menu/matrix as described above.

2009 – 2011 Annually update menu as new technologies and research emerges.

Specific Components and Notes:

Resources Needed:

- Staff time to build BMP menu/matrix.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of BMPs in selection menu

2007: # of BMPs = _____

2008: # of BMPs = _____

2009: # of BMPs = _____

2010: # of BMPs = _____

2011: # of BMPs = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-7 (Permit Section IV.D)

BMP Title:	LIST WATER QUALITY MODELING OPTIONS
BMP Description:	<p><i>As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:</i></p> <p>“2.7 Develop a list of water quality modeling options. Water quality models are used to simulate phosphorus loading reduction associated with different BMP implementation strategies. Models can be used to develop a scenario that achieves the 30 percent reduction. For example, models can be used to identify locations where BMPs will help achieve the greatest reductions. The Minnesota Stormwater Manual provides a list of water quality models. In general, more accurate mapping of stormwater conveyances and watersheds allows employment of simpler water quality modeling.”</p> <p>At this time, the City will not model for phosphorus reductions. Simple calculations will be tracked in an Excel spreadsheet as described in BMP Sheet P1-4.</p> <p>Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.</p> <p>Measurable Goals: See BMP Sheet P1-4 for measurable goals.</p> <p>Timeline/Implementation Schedule: See BMP Sheet P1-4 for timeline and implementation schedule.</p> <p>Specific Components and Notes: See BMP Sheet P1-4.</p> <p>Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us</p> <div>Recordkeeping & Reporting: See BMP Sheet P1-4.</div>

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-8 (Permit Section IV.D)

BMP Title: **INVESTIGATE LOW IMPACT DEVELOPMENT OPTIONS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“2.8 Determine if low impact development (LID) is an option in new developments and in redevelopment. MPCA is conducting studies with communities to investigate ways in which to incorporate LID into new developments.”

Low impact development is a newer idea for the City of Mankato. The first step to implementing this philosophy will be to train staff in the concepts. Once staff members become knowledgeable, a work group will be formed to develop an implementation plan. The initial efforts will focus on implementing low impact concepts into new development and redevelopment. Following this implementation measure, efforts will focus on retrofitting existing areas of town to include low impact concepts. The work on this BMP continues with BMP P3-2, “Incorporate Low Impact Design Into Development” and BMP P3-3 “Develop TMDL Public Communication Plan.”

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will quantify the work done on this BMP by:

- # of trained staff.
- # of workgroup members.

Timeline/Implementation Schedule:

Baseline – The City does not implement or encourage LID at this time.

2007 – 2008 Send City staff to LID training.

2009 – 2010 Initiate LID work group and develop implementation plan.

2011 – Annually update progress and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to attend training and attend work group meetings.
- Staff time to develop implementation plan.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007 – 2008 Trained Staff Members:

2009 LID Workgroup Members:

TS = Trained Staff

WGM = Work Group Members

2007: TS = _____	WGM = _____
2008: TS = _____	WGM = _____
2009: TS = _____	WGM = _____
2010: TS = _____	WGM = _____
2011: TS = _____	WGM = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-9 (Permit Section IV.D)

BMP Title: **DESCRIBE LEGAL TOOLS FOR BMP IMPLEMENTATION**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“2.9 Describe legal tools that can be used or will be needed to implement BMPs. These include ordinances, building codes, easements, and ownerships. Determine what changes can be made in legal authorities, including development of new ordinances or changes to existing ordinances. Determine the relationship between individual BMPs from the BMP menu and regulatory or non-regulatory requirements. Adopt or establish the framework and schedule needed for new legal authorities.”

Currently, the City has the following legal tools in place for BMP implementation:

- Ordinance 3.33 Storm Water System (Can be viewed on BMP Sheet 3b-1.)
- Ordinance 12.02 Erosion and Sediment Control (Can be viewed on BMP Sheet 4a-1.)
- Storm Water Pollution Prevention Program (Adopted by the City Council in 2007.)

Once the City has calculated the remaining phosphorus reduction needed to meet the goals of the TMDL, the City will develop a plan to bring the efforts to completion. It is likely the City will need more legal tools to achieve the ultimate reduction.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of legal tools that support BMP implementation.

Timeline/Implementation Schedule:

2007 – 2009 Calculate phosphorus reductions as described in P1-4.

2009 – 2011 Draft and adopt new ordinances needed to complete the goals of the TMDL.

2007 – 2011 Annually update the list of legal tools.

Specific Components and Notes:

Resources Needed:

- Staff time to research ordinances.
- Staff time to evaluate effectiveness of current legal tools.
- Staff time to create and implement additional tools.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of legal tools that support
BMP Implementation (LT)

2007: LT = _____

2008: LT = _____

2009: LT = _____

2010: LT = _____

2011: LT = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-10 (Permit Section IV.D)

BMP Title: **DESCRIBE THE PLAT REVIEW PROCESS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“2.10 Describe the plat review process. State whether the city has control or a voice in the planning of land developments. Identify the relationships between different entities involved in the plat review process and the communication tools that exist between these different entities. Determine if changes to the plat review and building permit process, including inspections, will be needed to implement BMPs identified in the BMP menu. Determine if appropriate authority exists to modify the existing plat review process. Modify or establish the framework for modifying the plat review process.”

The City has a formal plat review process. All new or altered plats must go through the site plan review committee. Prior to the meeting, all preliminary and final plats are distributed to the department heads and often routed through multiple people in each department. Once per month, the City Directors meet to discuss the sites. Currently, the MS4 Coordinator offers input to the Director of Engineering prior to the meetings.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of site plan review (SPR) committee meetings.

Timeline/Implementation Schedule:

2007 – 2011 Annually review the site plan review process and recommend changes if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to review plats.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: # of SPR Meetings = _____

2007: # of SPR Meetings = _____

2007: # of SPR Meetings = _____

2007: # of SPR Meetings = _____

2007: # of SPR Meetings = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-11 (Permit Section IV.D)

BMP Title: DESCRIBE EXISTING FUNDING MECHANISMS & NEEDS								
BMP Description: <i>As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:</i>								
<p>“2.11 Describe existing funding mechanisms that can be used or will be needed to implement and maintain BMPs. These include fees, taxes, escrows, capital improvement projects, and trusts. Examples include stormwater utility fees assessed against monthly utility bills or, conversely, incentives to homeowners to reduce utility fees by implementing BMPs such as rain barrels or rain gardens. Identify mechanisms for increasing funding and capital improvement project scheduling. Determine if there is a relationship between individual BMPs from the BMP menu and funding mechanisms. Implement or establish the framework for implementation needed funding mechanisms.”</p> <p>The City currently has the following funding mechanisms in place for BMP implementation:</p> <ul style="list-style-type: none">• Stormwater Utility Fee (\$3 per residence, more for commercial) <p>It is thought the stormwater program cannot be funded from this money alone. The storm water utility fee will either need to be increased or funding from an alternate source will need to be allocated to this program.</p> <p>Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.</p>								
Measurable Goals: <p>The City of Mankato will measure and show effectiveness by:</p> <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. <p>The City of Mankato will be able to quantify the work done on this BMP by:</p> <ul style="list-style-type: none">• # of funding mechanisms in place.								
Timeline/Implementation Schedule: <p>Baseline – The City has a storm water utility fee for properties within city limits. 2007 – Define the implementation costs for all components of the SWPPP, including the TMDL requirements. 2008 – Compare costs to the funding available and determine methods to cover shortages. 2008 – 2011 Annually review anticipated costs and available funds.</p>								
Specific Components and Notes: <p>Resources Needed:</p> <ul style="list-style-type: none">• Staff time to define the cost of the storm water program.• Staff time to research other funding mechanisms.• Staff time to keep the storm water program operating within budget.								
Responsible Party for this BMP: <p>Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us</p>	<table border="1"><tr><td>Recordkeeping & Reporting:</td></tr><tr><td># of funding mechanisms (FM)</td></tr><tr><td>2007: FM = _____</td></tr><tr><td>2008: FM = _____</td></tr><tr><td>2009: FM = _____</td></tr><tr><td>2010: FM = _____</td></tr><tr><td>2011: FM = _____</td></tr></table>	Recordkeeping & Reporting:	# of funding mechanisms (FM)	2007: FM = _____	2008: FM = _____	2009: FM = _____	2010: FM = _____	2011: FM = _____
Recordkeeping & Reporting:								
# of funding mechanisms (FM)								
2007: FM = _____								
2008: FM = _____								
2009: FM = _____								
2010: FM = _____								
2011: FM = _____								

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-12 (Permit Section IV.D)

BMP Title: **ESTABLISH SCHEDULE FOR MONITORING, OPERATING, AND MAINTAINING BMPS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“2.12 Establish a schedule for monitoring, operating, and maintaining BMPs. Permittees will be responsible for monitoring progress in implementing BMPs to meet the TMDL requirement and in maintaining BMPs that have been implemented. The MPCA and University of Minnesota are currently developing guidance that establishes four levels of monitoring. This guidance will be useful to communities in deciding appropriate levels of monitoring for BMPs. Monitoring requirements may be included in the BMP menu. For BMPs in place, implement the monitoring, operation, and maintenance schedule. The Minnesota Stormwater Manual contains information on maintenance requirements for different BMPs.”

Once the list of BMPs has been inventoried, a maintenance schedule will need to be developed. Currently, the City has a process to address a problem if one is reported, but does not have an active operation and maintenance program for some of the most common BMPs, such as detention ponds, infiltration basins, etc.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of BMPs on a maintenance schedule.

Timeline/Implementation Schedule:

Baseline – The City can fix problems, but does not have an active operation and maintenance schedule for BMPs.

2007 – The City will inventory the BMPs that are in place. and establish a maintenance schedule for them.

2008 – The City will establish a maintenance schedule for the BMPs in the inventory.

2008 – 2011 Begin maintenance as defined in the maintenance schedule.

2008 – 2011 Annually review the maintenance schedule and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to identify BMPs and create maintenance schedule.
- Staff time for maintenance procedures.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of BMPs on maintenance schedule (MS)

2007: MS = _____

2008: MS = _____

2009: MS = _____

2010: MS = _____

2011: MS = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-13 (Permit Section IV.D)

BMP Title:

INVENTORY SWPPP IMPLEMENTATION NEEDS

BMP Description:

As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:

“2.13 Inventory current and future technical tools and expertise necessary to accomplish the conditions of this SWPPP and subsequent SWPPPs. For example, will training be required of existing city staff or will database, GIS. For example, will modeling expertise be required either from consultants or from MPCA staff? As funding allows, secure technical resources needed for BMP selection and implementation. It may be necessary to hire consultants early in this process to select appropriate models and address data management and GIS issues.”

Throughout this SWPPP, the resources needed to implement the goals of each BMP have been listed under “Specific Components and Notes.” By far, the most needed resources are simply people, time, and money. BMP Sheet P2-11 covers the financial aspect of SWPPP (and TMDL) implementation. The aspect of personnel and time is addressed on this BMP Sheet and will need to be addressed annually during an inter-departmental meeting.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of departments with storm water responsibilities.

Timeline/Implementation Schedule:

Baseline – The City has not clearly identified the personnel requirements for successful SWPPP implementation.
2007 – 2011 Conduct an annual meeting to discuss departmental distribution of work.

Specific Components and Notes:

Resources Needed:

- Annual inter-departmental meeting.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

2007: Annual Meeting Date: ___ / ___ / 07; # of Depts = ___

2008: Annual Meeting Date: ___ / ___ / 08; # of Depts = ___

2009: Annual Meeting Date: ___ / ___ / 09; # of Depts = ___

2010: Annual Meeting Date: ___ / ___ / 10; # of Depts = ___

2011: Annual Meeting Date: ___ / ___ / 11; # of Depts = ___

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P2-14 (Permit Section IV.D)

BMP Title: IMPLEMENT IMMEDIATE BMPs WHERE POSSIBLE	
BMP Description: <i>As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:</i> “2.14 Determine if there are BMPs that can be implemented immediately. This may require completion of the BMP menu so that appropriate BMPs can be selected. MPCA benchmarking studies will be of value in identifying generic BMPs that can be employed for phosphorus reduction.” Once the menu of BMPs has been created (see BMP Sheet P2-6), the City will implement additional BMPs that are immediately possible. There may be some simple solutions not requiring a large amount of time or money that have simply been overlooked. Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.	
Measurable Goals: The City of Mankato will measure and show effectiveness by: <ul style="list-style-type: none">• On-time completion of tasks in the implementation schedule. The City of Mankato will be able to quantify the work done on this BMP by: <ul style="list-style-type: none">• # of the different types of BMPs in place.	
Timeline/Implementation Schedule: Baseline – The City does not have a BMP menu at this time. 2007 – 2011 Annually update BMP menu and look for simple solutions that can be implemented immediately.	
Specific Components and Notes: Resources Needed: <ul style="list-style-type: none">• Staff time to implement new BMPs.	Recordkeeping & Reporting: 2007: # of Types of BMPs in place = _____ 2007: # of Types of BMPs in place = _____ 2007: # of Types of BMPs in place = _____ 2007: # of Types of BMPs in place = _____ 2007: # of Types of BMPs in place = _____
Responsible Party for this BMP: Name: Emily Javens, PE, CPESC Department: Engineering Phone: (507) 387-8643 E-mail: stormwater@city.mankato.mn.us	

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P3-1 (Permit Section IV.D)

BMP Title: **IMPLEMENT NON-STRUCTURAL BMPS**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“3.1 **Implement nonstructural BMPs**, such as street sweeping, storm drain maintenance, storm drain stenciling, lawn care education, and mowing reductions.”

The City has an active street sweeping program described in BMP Sheet 6a-2. (Contact: Chuck Thomas, Streets)

Storm Drain Maintenance – The City has an active storm drain maintenance program. (Contact: Tom Fournier, Utilities)

No-Mow Zones - The City intends to educate citizens regarding the “No-Mow Zones” along sediment basins and ponds and following up with enforcement. (Contact: Tom Severns, Parks and Brian Hagberg, City Forester)

Lawn Care Education will be covered as one of the topics in BMP Sheet 1a-1 (Distribute Educational Materials) and will include information regarding the use of phosphorus-free fertilizers, no-mow zones, and the importance of keeping clippings on grassy surfaces. City mowing staff will be trained to keep grass clippings on grassy surfaces and avoid paved surfaces. (Contact: Shelly Schulz, Public Information)

Mowing Reductions – The City will annually consider if any locations requiring mowing can be converted to native prairie grasses not requiring mowing. (Contact: Tom Severns, Parks)

Storm Drain Stenciling has been done periodically in the past. The City will consider bringing it back.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of feet of storm drain work orders.
- # of educational efforts regarding lawn care.
- # of sediment basins with delineated and posted “no-mow” zones.

Timeline/Implementation Schedule:

Baseline – The City takes an active role as indicated above.

2007 – 2011 Continue progress as defined above.

2007 – 2011 Update list of activities as needed.

Specific Components and Notes:

Resources Needed:

- Staff time to implement and oversee BMP goals.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of storm drain work orders (SD)

of educational efforts for lawn care (EE)

of sediment basins with no-mow zones (NMZ)

2007: SD = _____ EE = _____ NMZ = _____

2008: SD = _____ EE = _____ NMZ = _____

2009: SD = _____ EE = _____ NMZ = _____

2010: SD = _____ EE = _____ NMZ = _____

2011: SD = _____ EE = _____ NMZ = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P3-2 (Permit Section IV.D)

BMP Title: **INCORPORATE LOW IMPACT DESIGN INTO DEVELOPMENT**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“3.2 Incorporate Better Site Design (BSD) and Low Impact Development (LID) into all redevelopment and new development projects.”

The efforts associated with the BMP start with BMP Sheet P2-8. To recap, the City will train staff in the design philosophies of low impact development. A work group will be created to guide the implementation of low impact development. The first task will be to implement low impact ideas into new development. The second challenge will be to implement low impact design into redevelopment. Lastly, the City will look for opportunities to retrofit existing infrastructure using low impact design concepts to existing areas of town, especially the downtown area. A large portion of the storm water runoff from the downtown area flows into the Minnesota River without treatment.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of new development projects incorporating BSD or LID concepts.
- # of redevelopment projects incorporating BSD or LID concepts.
- # of retrofits not associated with new or re-development projects incorporating BSD or LID concepts.

Timeline/Implementation Schedule:

Baseline – The City does not implement or encourage LID at this time.

2007 – 2008 Send City staff to LID training.

2009 – 2010 Initiate LID work group and develop implementation plan.

2010 – 2011 BSD/LID requirements to be in place for new and redevelopment.

2007 – 2011 Annually review BMP and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time and money for training.
- Staff time to develop implementation plan.
- Money to retrofit existing infrastructure.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of new development projects using BSD/LID (New)

of redevelopment projects using BSD/LID (Redev)

of retrofit projects using BSD/LID (Retro)

2007: New = _____ Redev = _____ Retro = _____

2008: New = _____ Redev = _____ Retro = _____

2009: New = _____ Redev = _____ Retro = _____

2010: New = _____ Redev = _____ Retro = _____

2011: New = _____ Redev = _____ Retro = _____

BMP Summary Sheet

MS4 Name: City of Mankato, MN

TMDL Compliance Measure: LOWER MN RIVER DISSOLVED OXYGEN TMDL

Unique BMP Identification Number: P3-3 (Permit Section IV.D)

BMP Title: **DEVELOP TMDL PUBLIC COMMUNICATION PLAN**

BMP Description: *As stated in the document entitled: Guidance for Communities on How to Integrate Lower Minnesota River Dissolved Oxygen TMDL Requirements and MS4 Stormwater Pollution Prevention Programs – DRAFT – May 2006:*

“3.3 Develop a Communication Plan to inform the community and stakeholders about the TMDL and the process for meeting requirements of the TMDL.”

The City intends to actively include the TMDL in all educational efforts as if there were 7 Minimum Control Measures instead of 6. The TMDL will be treated with the same commitment as the 6 MCMs. See BMP Sheet BMP 1a-1 for the methods the City intends to use to distribute educational materials.

Location(s) in SWPPP of detailed information relating to this BMP: The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of educational efforts made to distribute information on this TMDL.
- # of hits on the website for this topic.

Timeline/Implementation Schedule:

Baseline – The City has educated citizens regarding the phosphorus reductions required at the waste water treatment plant, but have not been educated on the efforts needed to reduce phosphorus from storm water effluent.
2007 – 2011 Distribute information on this TMDL through utility bills, targeted mailings, and the City’s website.
2007 – 2011 Annually review BMP and amend if necessary.

Specific Components and Notes:

Resources Needed:

- Staff time to prepare material for distribution.

Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: stormwater@city.mankato.mn.us

Recordkeeping & Reporting:

of TMDL educational efforts (EE)

of TMDL website hits (WPH)

2007: EE = _____ WPH = _____

2008: EE = _____ WPH = _____

2009: EE = _____ WPH = _____

2010: EE = _____ WPH = _____

2011: EE = _____ WPH = _____

APPENDIX



Minnesota Pollution Control Agency

**GENERAL PERMIT
AUTHORIZATION TO DISCHARGE STORM WATER
ASSOCIATED WITH MUNICIPAL SEPARATE STORM SEWER SYSTEMS
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM/STATE DISPOSAL SYSTEM PERMIT PROGRAM**

EFFECTIVE DATE: June 1, 2006 EXPIRATION DATE: May 31, 2011

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq.; hereinafter, the "Act"), 40 CFR 122, 123, and 124, as amended, et seq.; Minnesota Statutes Chapters 115 and 116, as amended, and Minnesota Rules Chapter 7001.

This permit establishes conditions for discharging **Storm Water** and specific other related discharges to **Waters of the State**. This permit is required for discharges that are from **Small Municipal Separate Storm Sewer Systems**, as defined in this permit.

Upon approval by the **Commissioner** applicants who submit a completed application in accordance with the requirements of this permit, are authorized to discharge **Storm Water** from **Small Municipal Separate Storm Sewer Systems**, under the terms and conditions of this permit.

Signature: _____

Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

Issuance Date: _____

3/3/06

If **You** have questions on this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact the appropriate Minnesota Pollution Control Agency offices.

Storm Water Management Unit
Storm Water Section
Municipal Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Phone (651) 296-6300, or
Toll free in MN 800-657-3864
Fax (651) 297-2343

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PART I. PERMIT GOALS

The primary goal of this permit is to restore and maintain the chemical, physical, and biological integrity of **Waters of the State** through management and treatment of urban **Storm Water** runoff. This is accomplished by management of **Municipal Separate Storm Sewer Systems** through a **Storm Water Pollution Prevention Program**. The purpose is to maintain water quality standards where there is compliance, and help bring waters that do not meet water quality standards into compliance. It should be noted that when there is a discharge to waters where there are limitations on coverage (Part II.B), there may be more stringent requirements that must be addressed. **You** may also voluntarily adopt more stringent measures to meet local goals.

PART II. COVERAGE UNDER THIS PERMIT

A. Eligibility

This permit, including appendices, authorizes discharges of **Storm Water** from **Small Municipal Separate Storm Sewer Systems** as defined in 40 CFR § 122.26(b)(16).

B. Limitations on Coverage

1. This permit does not authorize discharges other than **Storm Water**. Non-**Storm Water** discharges may include: combined sewer overflow, noncontact cooling water, sewage, wash water, scrubber water, spills, oil, hazardous substances, fill, commercial equipment/vehicle cleaning and maintenance wastewaters. A separate National Pollutant Discharge Elimination System (NPDES) permit may be required for these discharges.
2. This permit does not authorize the discharge of **Storm Water** when a separate NPDES permit is required for these activities. For example, while **Storm Water** from industrial activity or construction activity may be discharged from a **MS4** with authorized **Storm Water** discharges, this permit does not replace or satisfy any other permits required for those discharges.
3. This permit does not authorize the discharge of **Storm Water** from any other entity located in the drainage area or outside the drainage area. Only your system and the portions of the storm sewer system that are under your operational control are authorized by your permit.
4. This permit does not authorize the following **discharges** as described in Appendix C unless the requirements of Part IX (Appendix C) are met:
 - a. Discharges to waters with Prohibited Discharges as defined in Minn. R. 7050.0180, subp. 3, 4, and 5.

- b. Discharges to waters with Restricted Discharge as defined in Minn. R. 7050.0180, subp. 6, 6a, and 6b.
 - c. Discharges to Trout Waters as defined in Minn. R. 6264.0050, subp. 2 and 4.
 - d. Discharges to **Wetlands** as defined in Minn. R. 7050.0130, subp. F (see also Minn. R. 7050.0186).
 - e. Discharges requiring Environmental Review required by Minn. Stat. ch. 116D and 42 U.S.C. §§ 4321 – 4370 f.
 - f. Discharges Affecting Threatened or Endangered Species or Their Habitat.
 - g. Discharges Affecting Historic or Archeological Sites.
 - h. Discharges Affecting Source Water Protection Areas.
5. This permit does not allow **discharges** if the requirements of Part X (Appendix D) and schedule of Part XI (Appendix E) are applicable, unless the **MS4** is in compliance with those appendices.

C. Obtaining Authorization

In order for **Storm Water** discharges from **Small Municipal Separate Storm Sewer Systems** to be authorized to discharge under this **General Permit**:

- 1. Submit an application with the **Storm Water Pollution Prevention Program** **You** intend to implement under this permit, in accordance with the requirements of Part III, using a form provided by the **Commissioner** (or a facsimile thereof).
- 2. Where the ownership or significant operational control of the **MS4** changes, after the submittal of an application under Part III, a new application must be submitted in accordance with Part III.
- 3. The **Commissioner** will review the application and **Storm Water Pollution Prevention Program** for completeness and compliance with this permit. The **Commissioner** shall determine whether to approve coverage or to deny coverage to dischargers who submit a complete application. In accordance with the procedures of this permit and requirements of Minn. R. ch. 7001, the **Commissioner** shall provide public notice with the opportunity for hearing on the determination. Upon approval by the **Commissioner**, dischargers are authorized to discharge **Storm Water** from **Small Municipal Separate Storm Sewer Systems** under the terms and conditions of this permit.

4. The **Commissioner** may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the application or other information, in accordance with Minn. R. ch. 7000 and 7001.

PART III. APPLICATION REQUIREMENTS (Notice of Intent)

A. Deadlines for Application

If **You** are an **Owner** or **Operator** of a **Small Municipal Separate Storm Sewer System** regulated under 40 CFR § 122.32(a)(1), **You** must apply to obtain coverage under this permit within 90 days after the permit issuance date on page 1 of this permit. If **You** fail to make the application deadline, **You** are out of compliance and must submit an application. The **Owner** or **Operator** of an **MS4** that is not designated for coverage by federal rules, but has been designated under Minn. R. ch. 7090, must apply by the date specified in the **Commissioner's** designation documents.

B. Signature

The Application shall be signed in accordance with application forms provided by the **Commissioner** and shall include the following information:

1. The street address, county, and the **Owner** or **Person** with operational control of the **MS4** for which the notification is submitted; and
2. The name, address, and telephone number of the individual responsible for overall permit compliance.

C. Application Attachment: Storm Water Pollution Prevention Program

The proposed **Storm Water Pollution Prevention Program** for implementing the permit shall be attached to the application on forms provided by the **Commissioner** (or reasonable facsimiles), including:

1. The **Best Management Practices** or **BMPs** that **You** will implement for each of the **Storm Water** minimum control measures at Part V.G of this permit;
2. The measurable goals for each of the **BMPs**, including, as appropriate, the months and years in which **You** will undertake required actions, including interim milestones and the frequency of the action, in narrative or numeric form, as appropriate;
3. Estimated timeline(s) (months, years) in which **You** will implement each **BMP**; and

4. Individual(s) responsible for implementing and/or coordinating each component of the **Storm Water Pollution Prevention Program**. This should be the individual **You** want the **Agency** to contact for the particular component; it may be the overall coordinator or other individual.

D. Where to Submit

Applications signed in accordance with Part III.B of this permit, **Storm Water Pollution Prevention Programs** submitted under Part III.C, annual reports under Part VI.D, and submittals under Appendices C, D, and E, are to be submitted to the **Commissioner** at the following address:

Storm Water Management Unit
Storm Water Section
Municipal Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Phone (651) 296-6300, or
Toll free in MN 800-657-3864
Fax (651) 297-2343

E. Record Retention

The applicant shall retain copies of the permit application, the **Storm Water Pollution Prevention Program**, all data and information used by the applicant to complete the application, and any information developed as a requirement of this permit or as requested by the **Commissioner**, for a period of at least three (3) years beyond the date of permit expiration. This period is automatically extended during the course of an unresolved enforcement action regarding the **MS4** or as requested by the **Commissioner**.

PART IV. RIGHTS AND RESPONSIBILITIES

- A. The **Commissioner** may modify this permit or issue other permits, in accordance with Minn. R. ch. 7001, to include more stringent effluent limitations or permit requirements that modify or are in addition to the minimum control measures in Part V.G of this permit, or both. These modifications may be based on the **Commissioner's** determination that such modifications are needed to protect water quality.
- B. Additional **MS4s** may be designated for coverage under this permit in accordance with Minn. R. ch. 7090. The **Owner** or **Operator** of an **MS4** that is designated for coverage must comply with the permit requirements by the dates specified in the **Commissioner's** designation documents.

- C. You may request individual permits based on Minn. R. ch. 7000, 7001, and other applicable rules.
- D. Section 303(d) listings and **Total Maximum Daily Load (TMDL)**

If your **MS4** discharges to a **Water of the State** that appears on the current **USEPA** approved list of impaired waters under Section 303(d) of the Clean Water Act (33 U.S.C. § 303 (d)), **You** must review whether changes may be warranted in your **Storm Water Pollution Prevention Program to Reduce** the impact of your discharge. If a **USEPA**-approved **TMDL(s)** has been developed, **You** must review the adequacy of your **Storm Water Pollution Prevention Program** to meet the **TMDL's** Waste Load Allocation set for **Storm Water** sources. If the **Storm Water Pollution Prevention Program** is not meeting the applicable requirements, schedules and objectives of the **TMDL**, **You** must modify your **Storm Water Pollution Prevention Program**, as appropriate, within 18 months after the **TMDL** Waste Load Allocation is approved.

PART V. STORM WATER POLLUTION PREVENTION PROGRAM

- A. **You** must develop, implement, and enforce a **Storm Water Pollution Prevention Program** designed to **Reduce** the discharge of pollutants from your **Small MS4**, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. Upon approval by the **Commissioner**, the **Storm Water Pollution Prevention Program** shall be implemented as specified in the permit or in the **Commissioner's** approval letter.
- B. Your **Storm Water Pollution Prevention Program** must be designed and managed to **Reduce** the discharge of pollutants from your storm sewer system to the **Maximum Extent Practicable (MEP)**. **You** must manage your municipal storm sewer system in compliance with the Clean Water Act and with the terms and conditions of this permit. **You** must manage, operate, and maintain the storm sewer system and areas **You** control that discharge to the storm sewer system in a manner to **Reduce** the discharge of pollutants to the **MEP**. The **Storm Water Pollution Prevention Program** will consist of a combination of **Best Management Practices**, including education, maintenance, control techniques, system design and engineering methods, and such other provisions as **You** determined to be appropriate, as long as the **BMPs** meet the requirements of this permit.
- C. **You** shall submit an annual report on the implementation of the **Storm Water Pollution Prevention Program** by June 30 of each year, or on another later date if established for your **MS4** by the **Commissioner**. The report shall cover the entire previous calendar year, in accordance with the reporting requirements of Part VI.D.
- D. Your **Storm Water Pollution Prevention Program** must include **BMPs** that control or **Reduce** pollutants, as appropriate for your community. In the development of **BMPs** for your **Storm Water Pollution Prevention Program**,

You must consider the sources of pollutants, the potentially polluting activities being conducted in the watershed, and the sensitivity of the receiving waters. For **MS4s** that have discharges to waters listed in Part II.B.4, see Part IX (Appendix C) for additional requirements. For **MS4s** listed in Part XI (Appendix E), see Part X (Appendix D) for additional requirements.

- E.** For each minimum control measure, there shall be a description of the **BMPs** for this measure, responsible department in charge, an implementation schedule, including any request by **You** for consideration by the Commissioner of an extension or exemption from any deadlines and timelines set forth in this permit, and measurable goals that will be used to determine the success or benefits of the **BMPs**.
- F.** The **Storm Water Pollution Prevention Program** shall become an enforceable part of this permit upon approval by the **Commissioner**. Modifications to the **Storm Water Pollution Prevention Program** that are required or allowed by this permit (see Part V.H) shall also become enforceable provisions.
- G.** The six minimum control measures to be included in your **Storm Water Pollution Prevention Program** are listed below. **You** must define appropriate **BMPs** for these minimum control measures and measurable goals for each **BMP**. The **Storm Water Pollution Prevention Program** must include all **BMPs** required below, must include annual schedules or procedures for implementation, and, where appropriate, must be implemented or established in ordinance, plan or policy by June 30, 2010, unless other timelines have been specifically established in this permit Part V.G.1-6, or by the **Commissioner** under Part IV.B, or under other rules and authorities.

 - 1. Public education and outreach on **Storm Water** impacts. **You** must select and implement a program of appropriate **BMPs** and measurable goals for this minimum control measure consisting of, at minimum:

 - a. **You** must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of **Storm Water** discharges on water bodies and the steps that the public can take to **Reduce** pollutants in **Storm Water** runoff.
 - b. **You** must specifically implement an education program that individually addresses each minimum control measure (Part V.G.1-6):

 - 1) Public education and outreach;
 - 2) Public participation;
 - 3) Illicit discharge detection and elimination;
 - 4) Construction site **Storm Water** runoff control;

- 5) Post-construction **Storm Water** management in **New Development and Redevelopment**; and
 - 6) Pollution prevention/good housekeeping for municipal operations.
- c. For each control measure, your education program must identify:
- 1) The audience or audiences involved;
 - 2) Educational goals for each audience in terms of increased awareness, increased understanding, acquired skills, and/or desired changes in behavior;
 - 3) Activities used to reach educational goals for each audience;
 - 4) Activity implementation plans, including responsible department in charge, entities responsible for given activities, and schedules; and
 - 5) Available performance measures that can be used to determine success in reaching educational goals.
- d. **You** must describe how your education program is coordinated with and makes effective use of other **Storm Water** education programs being conducted in your area by other entities as appropriate for your **MS4**, including, but not limited to: community groups, nonprofit organizations, lake conservation districts, soil and water conservation districts, watershed districts, watershed management organizations, school districts, University of Minnesota Extension, and county, regional, state, and federal government.
- e. **You** must hold at least one public meeting per year addressing the **Storm Water Pollution Prevention Program**. **You** must hold the public meeting prior to submittal to the **Commissioner** of the annual report required in Part VI.D.
- 1) Location. The public informational meeting must be held in the general vicinity of the **MS4** that is the subject of the permit. Otherwise, the public informational meeting must be held in a place that is generally convenient to **Persons** expected to attend the meeting.
 - 2) Notice. **You** must issue a notice of the public informational meeting at least 30 days prior to the meeting. The notice must contain a reference to the **Storm Water Pollution Prevention Program**, the date, time, and location of the public informational meeting; a concise description of the manner in which the public informational meeting will be conducted; and shall indicate the location where a copy of the **Storm Water Pollution Prevention Program** is available for public review.
 - 3) Distribution of notice. **You** must publish the notice in a **Newspaper** of general circulation in the general vicinity of the

MS4, and shall make available a copy of the notice to the **Agency**, the appropriate city and county officials, and all other **Persons** who have requested that they be informed of public meetings for the **Storm Water Pollution Prevention Program**.

- 4) Joint meetings. **You** may consolidate two or more matters, issues, or related groups of issues, or hold joint **MS4** public meetings with other permittees to meet the requirements of this part. These public meetings may be part of a larger public meeting, such as a city council meeting, provided that adequate public notice and opportunity to participate is provided.
2. Public participation/involvement. **You** must select and implement a program of appropriate **BMPs** and measurable goals for this minimum control measure consisting of, at minimum:
 - a. **You** must comply with applicable public notice requirements of Part V.G.1.e.2 when implementing the provisions of the **Storm Water Pollution Prevention Program**.
 - b. **You** must solicit public input and opinion on the adequacy of the **Storm Water Pollution Prevention Program**, including input from the public meeting, described in Part V.G.1.e, each year prior to submittal of the annual report to the **Commissioner**, which is described in Part VI.D.
 - 1) **You** must afford interested **Persons** a reasonable opportunity to make oral statements concerning the **Storm Water Pollution Prevention Program**.
 - 2) **You** must consider timely, relevant written materials that interested **Persons** submit concerning the **Storm Water Pollution Prevention Program**.
 - 3) **You** may establish procedures and processes for each speaker's presentation, require speakers with similar views to select a spokesperson, specify the timing and format of written materials, or make similar rules to help ensure an opportunity for full and fair consideration of all views.
 - c. **You** must consider the public input, oral and written, to the **Storm Water Pollution Prevention Program** and shall make adjustments **You** find appropriate.
 3. Illicit discharge detection and elimination. **You** must develop, implement, and enforce a program to detect and eliminate illicit discharges as defined at 40 CFR § 122.26(b)(2) into your **Small MS4**. **You** must also select and implement a program of appropriate **BMPs** and measurable goals for this minimum control measure consisting of, at minimum:

- a. **You** must develop, if not already completed, a storm sewer system map by June 30, 2008, or on another date established by the **Commissioner**, showing the location of:
 - 1) Ponds, streams, lakes and **Wetlands** that are part of your system;
 - 2) Structural pollution control devices (grit chambers, separators, etc.) that are part of your system;
 - 3) All pipes and conveyances in your system as a goal, but at minimum, those pipes that are 24 inches in diameter and over; and
 - 4) **Outfalls**, including discharges from your system to other **MS4s**, or waters and **Wetlands** that are not part of your system (where **You** do not have operational control); structures that discharge storm water directly into groundwater; overland discharge points and all other points of discharge from your system that are outlets, but not diffuse flow areas.
 - b. **You** must, to the extent allowable under law, effectively prohibit, through ordinance or **Other Regulatory Mechanism**, non-**Storm Water** discharges into your storm sewer system and implement appropriate enforcement procedures and actions.
 - c. **You** must develop and implement a program to detect and address non-**Storm Water** discharges, including illegal dumping, to your system.
 - d. **You** must inform employees, businesses, and the general public in your **MS4** area of hazards associated with illegal discharges and improper disposal of waste.
 - e. **You** must address the following categories of non-**Storm Water** discharges or flows (i.e., illicit discharges), only if **You** identify them as significant contributors of pollutants to your **Small MS4**:

water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR § 35.2005(b)(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and **Wetlands**, dechlorinated swimming pool discharges, and street wash water, discharges or flows from fire fighting activities.
4. Construction site **Storm Water** runoff control. Within six months after extension of coverage under this permit, **You** must have developed and must have commenced to implement and enforce a program to **Reduce** pollutants in any **Storm Water** runoff to your **Small MS4** from construction activities

within your jurisdiction that result in a land disturbance of greater than or equal to one acre. Controls on **Storm Water** discharges from construction activity disturbing less than one acre must be included in your program, if that construction activity is part of a larger **Common Plan of Development or Sale** that would disturb one acre or more. **You** must also select and implement a program of appropriate **BMPs** and measurable goals for this minimum control measure consisting of, at minimum:

- a. An ordinance or **Other Regulatory Mechanism** to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under law;
 - b. Requirements for construction site operators to implement appropriate erosion and sediment control **Best Management Practices**;
 - c. Requirements for construction site operators to control waste, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
 - d. Procedures for site plan review which incorporate consideration of potential water quality impacts;
 - e. Procedures for receipt and consideration of reports of noncompliance or other information on construction related issues submitted by the public; and
 - f. Procedures for site inspection and enforcement of control measures.
5. Post-construction **Storm Water** management in **New Development and Redevelopment**. **You** must develop, implement, and enforce a program to address **Storm Water** runoff from **New Development and Redevelopment** projects within your jurisdiction that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger **Common Plan of Development or Sale** that discharge into your **Small MS4** by June 30, 2008, or on another date established by the **Commissioner**. Your program must ensure that controls are in place that would prevent or **Reduce** water quality impacts. **You** must also select and implement a program of appropriate **BMPs** and measurable goals for this minimum control measure consisting of, at minimum:
- a. Develop and implement strategies which include a combination of structural and/or non-structural **BMPs** appropriate for your community;

- b. Use an ordinance or **Other Regulatory Mechanism** to address post-construction runoff from **New Development** and **Redevelopment** projects to the extent allowable under law; and
 - c. Ensure adequate long-term operation and maintenance of **BMPs** installed as a result of these requirements.
6. Pollution prevention/good housekeeping for municipal operations. **You** must select and implement a program of appropriate **BMPs** and measurable goals for this minimum control measure consisting of, at minimum:
- a. An operation and maintenance program that includes a training component and has the ultimate goal of preventing or **Reducing** pollutant runoff from **MS4** operations. Training materials that are available from the **USEPA**, state and regional agencies, or other organizations may be used as appropriate or modified for your community. Your program must include employee training to prevent and **Reduce Storm Water** pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and **Storm Water** system maintenance.
 - b. **You** must also:
 - 1) Operate and maintain your **Storm Water** system in a manner so as to **Reduce** the discharge of pollutants to the **Maximum Extent Practicable**.
 - 2) Inspect annually all structural pollution control devices, such as trap manholes, grit chambers, sumps, floatable skimmers and traps, separators, and other small settling or filtering devices.
 - 3) Inspect, at minimum, 20% of the **MS4 Outfalls**, sediment basins and ponds each year on a rotating basis, during the effective period of this permit.
 - 4) Inspect all exposed stockpile, storage and material handling areas at least annually.
 - 5) Based on your inspection, determine if repair, replacement, or maintenance measures are necessary for proper operation and to prevent environmental impacts such as erosion. The necessary measures shall be completed as soon as possible, usually during the same year as the inspection. When this is not practicable, the reasons and a schedule for completion shall be submitted in the annual report.
 - 6) Summarize the results of all inspections in the annual report. Keep records on the dates of inspection and responses to the inspections, including the date of completion of repairs and major additional protection measures.

- 7) Keep records of inspection results, including as appropriate, the date, antecedent weather conditions, sediment storage and capacity remaining, and any maintenance performed or recommended. After two years of inspections, if patterns of maintenance become apparent, the frequency of inspections may be adjusted. If maintenance or sediment removal is required as a result of each of the first two annual inspections, the frequency of inspection shall be increased to at least two (2) times annually, or more frequently as needed to prevent carry-over or washout of pollutants from the structures and maximize pollutant removal. If maintenance or sediment removal is not required as a result of both of the first two (2) annual inspections, the frequency may be reduced to once every two (2) years.

H. Modifications to the Storm Water Pollution Prevention Program

1. The **Commissioner** may require **You** to modify the **Storm Water Pollution Prevention Program** as needed, in accordance with the procedures of Minn. R. ch. 7001, and may consider the following factors:
 - a. Discharges from the storm sewer system are impacting the quality of receiving waters;
 - b. More stringent requirements are necessary to comply with state or federal regulations;
 - c. Measures are necessary to meet the applicable requirements of Appendices C and D, or
 - d. Additional conditions are deemed necessary to comply with the goals and requirements of the Clean Water Act or water quality standards.
2. Modifications that **You** wish to make in your **Storm Water Pollution Prevention Program**, other than modifications allowed in Part H.3 below, must be approved by the **Commissioner** in accordance with the procedures of Minn. R. ch. 7001. All requests must be in writing, setting forth schedules for compliance. The request should discuss alternative program modifications, assure compliance with requirements of the permit, and meet other requirements of the permit and applicable laws.
3. The **Storm Water Pollution Prevention Program** may only be modified by **You** without prior approval of the **Commissioner**, provided it is in accordance with the following:
 - a. A **BMP** is added, and none subtracted, from the **Storm Water Pollution Prevention Program**; or

- b. A less effective **BMP** identified in the **Storm Water Pollution Prevention Program** is replaced with a more effective **BMP**. The alternate **BMP** shall address the same, or similar, concerns as the ineffective or failed **BMP**; and
- c. The **Commissioner** is notified of the modification in the annual report for the year the modification is made.

PART VI. EVALUATING, RECORDKEEPING AND REPORTING

A. Evaluation and Assessment

For each annual report, **You** must evaluate program compliance, the appropriateness of your identified **Best Management Practices**, and progress towards achieving your identified measurable goals.

B. Recordkeeping

You must keep records required by the NPDES permit for at least three (3) years beyond the term of the permit. **You** must submit your records to the **Commissioner** only if specifically asked to do so.

C. Public Availability

You must make your records, including your **Storm Water Pollution Prevention Program**, available to the public at reasonable times during regular business hours (see 40 CFR § 122.7 for confidentiality provision). **You** may assess a reasonable charge for copying. **You** may require a member of the public to provide advance notice.

D. Annual Reporting

You must submit annual reports to the **MPCA** by June 30 of each year. The report must cover the entire previous calendar year. Your annual report must summarize:

1. The status of compliance with permit conditions, including an assessment of the appropriateness of your identified **Best Management Practices** and progress towards achieving your identified measurable goals for each of the minimum control measures. Your assessment must be based on results of information collected and analyzed, including monitoring (if any), inspection findings, and public input received during the reporting period;
2. The **Storm Water** activities **You** plan to undertake during the next reporting cycle;
3. A change in any identified **Best Management Practices** or measurable goals for any of the minimum control measures; and

4. A statement that **You** are relying on another entity to satisfy some of your permit obligations (if applicable), and what agreements **You** have entered into in support of this effort.

E. Reporting Submittals

The applications, annual reports, **Storm Water Pollution Prevention Program**, and other submittals required by this permit shall be submitted to:

Storm Water Management Unit
Storm Water Section
Municipal Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

PART VII. APPENDIX A: STANDARD CONDITIONS

- A.** The **Agency's** issuance of a permit does not release the permittee from any liability, penalty, or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit.
- B.** The **Agency's** issuance of a permit does not prevent the future adoption by the **Agency** of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the permittee.
- C.** The permit does not convey a property right or an exclusive privilege.
- D.** The **Agency's** issuance of a permit does not obligate the **Agency** to enforce local laws, rules, or plans beyond that authorized by Minnesota statutes.
- E.** The permittee shall perform the actions or conduct the activity authorized by the permit in accordance with the plans and specifications approved by the **Agency** and in compliance with the conditions of the permit.
- F.** The permittee shall at all times properly operate and maintain the facilities and systems of treatment and control and the appurtenances related to them which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible.
- G.** The permittee may not knowingly make a false or misleading statement, representation, or certification in a record, report, plan, or other document required to be submitted to the **Agency** or to the **Commissioner** by the permit. The permittee shall immediately upon discovery report to the **Commissioner** an error or omission in these records, reports, plans, or other documents.
- H.** The permittee shall, when requested by the **Commissioner**, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit.
- I.** When authorized by Minn. Stat. §§ 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the **Agency**, or an authorized employee or agent of the **Agency**, shall be allowed by the permittee to enter at reasonable times

upon the property of the permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit.

- J.** If the permittee discovers, through any means, including notification by the **Agency**, that noncompliance with a condition of the permit has occurred, the permittee shall take all reasonable steps to minimize the adverse impacts on human health, public drinking water supplies, or the environment resulting from the noncompliance.
- K.** If the permittee discovers that noncompliance with a condition of the permit has occurred which could endanger human health, public drinking water supplies, or the environment, the permittee shall, within 24 hours of the discovery of the noncompliance, orally notify the **Commissioner**. Within five days of the discovery of the noncompliance, the permittee shall submit to the **Commissioner** a written description of the noncompliance; the cause of the noncompliance; the exact dates of the period of the noncompliance; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- L.** The permittee shall report noncompliance with the permit not reported under item K as a part of the next report, which the permittee is required to submit under this permit. If no reports are required within 30 days of the discovery of the noncompliance, the permittee shall submit the information listed in item K within 30 days of the discovery of the noncompliance.
- M.** The permittee shall give advance notice to the **Commissioner** as soon as possible of planned physical alterations or additions to the permitted facility (**MS4**) or activity that may result in noncompliance with a Minnesota or federal pollution control statute or rule or a condition of the permit.
- N.** The permit is not transferable to any **Person** without the express written approval of the **Agency** after compliance with the requirements of Minn. R. 7001.0190. A **Person** to whom the permit has been transferred shall comply with the conditions of the permit.
- O.** The permit authorizes the permittee to perform the activities described in the permit under the conditions of the permit. In issuing the permit, the state and **Agency** assume no responsibility for damage to **Persons**, property, or the environment caused by the activities of the permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under the permit. To the extent the state and **Agency** may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act, Minn. Stat. § 3.736.

- P.** This permit incorporates by reference the applicable portions of 40 CFR §§ 122.41 and 122.42 parts (c) and (d) and Minn. R. 7001.1090, which are enforceable parts of this permit.

PART VIII. APPENDIX B: DEFINITIONS

The definitions in this Part are for purposes of this permit only.

“Agency” or “Agency members” means the **Commissioner** and the eight persons appointed to the Minnesota Pollution Control Agency, pursuant to Minn. Stat. § 116.02, subd. 1.

“Best Management Practices” or “BMPs” means practices to prevent or **Reduce** the pollution of the **Waters of the State**, including schedules of activities, prohibitions of practices, and other management practices, and also includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge, or waste disposal or drainage from raw material storage.

“Commissioner” means the **Commissioner** of the Minnesota Pollution Control Agency or the **Commissioner's** designee.

“Common Plan Of Development Or Sale” means a contiguous area where multiple separate and distinct construction activities are planned to occur at different times on different schedules under one plan, for example, a housing development of five one-quarter-acre lots (40 CFR § 122.26(b)(15)(i)).

“Designated MS4” means an MS4 designated in accordance with Minn. R. ch. 7090.

“EPA” means the U.S. Environmental Protection Agency.

“Expanded Discharge” means a discharge that changes in volume, quality, location, or any other manner after January 1, 1988 or the effective date an outstanding resource value water was designated as described in Minn. R. 7050.0460 and 7050.0470, such that an increased loading of one or more pollutants results. In determining whether an increased loading of one or more pollutants would result from the proposed change in the discharge, the **Agency** shall compare the loading that would result from the proposed discharge with the loading allowed by the **Agency** as of January 1, 1988 or the effective date of outstanding resource value water designation. This definition does not apply to the discharge of bioaccumulative chemicals of concern, as defined in Minn. R. 7052.0010, subp. 4, to outstanding resource value waters in the Lake Superior Basin. For purposes of Minn. R. 7050.0180, an expanded discharge of a bioaccumulative chemical of concern to an outstanding resource value water in the Lake Superior Basin is defined in Minn. R. 7052.0010, subp. 18.

“General Permit” means a permit issued under Minn. R. 7001.0210 to a category of permittees whose operations, emissions, activities, discharges, or facilities are the same or substantially similar.

“Maximum Extent Practicable” “MEP” is the statutory standard (33 U.S.C. § 1342(p)(3)(B)(iii)) that establishes the level of pollutant reductions that an **Owner** or

Operator of Regulated MS4s must achieve. The **USEPA** has intentionally not provided a precise definition of **MEP** to allow maximum flexibility in **MS4** permitting. The pollutant reductions that represent **MEP** may be different for each **Small MS4**, given the unique local hydrologic and geologic concerns that may exist and the differing possible pollutant control strategies. Therefore, each permittee will determine appropriate **BMPs** to satisfy each of the six minimum control measures through an evaluative process. The **USEPA** envisions application of the **MEP** standard as an iterative process.

“MPCA” means the Minnesota Pollution Control Agency.

“MS4” means a **Municipal Separate Storm Sewer System**.

“Municipal Separate Storm Sewer System” means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, **Storm Water**, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management Agency under section 208 of the CWA (33 U.S.C. § 1288) that discharges to waters of the United States;
2. Designed or used for collecting or conveying **Storm Water**;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR § 122.2.

“New Development” means construction activities that create new impervious surface.

“New Discharge” For all waters that are not outstanding resource value waters **New Discharge** means a discharge that was not in existence before January 1, 1988. For outstanding resource value waters **New Discharge** means a discharge that was not in existence on the effective date the outstanding resource value water was designated as described in Minn. R. 7050.0460 and 7050.0470.

“Newspaper” means a publication containing news of general interest in the vicinity of the **MS4**. It can include other publications if the distribution includes the general population of potentially interested parties.

“Notice of Intent” as referenced in the **USEPA** documents is synonymous with the term “permit application” for the purposes of this permit.

“Other Regulatory Mechanism” means any legally enforceable document, such as a contract or other agreement that has penalties such as withholding payments, fines or other measures to prevent non compliance.

“Operator” means the **Person** with primary operational control and legal responsibility for the **Municipal Separate Storm Sewer System**.

“Outfall” means the point source where a **Municipal Separate Storm Sewer System** discharges from a pipe, ditch, or other discrete conveyance to receiving waters, or to other **Municipal Separate Storm Sewer Systems**. It does not include diffuse runoff or conveyances which connect segments of the same stream or water systems.

“Owner” means the **Person** that owns the **Municipal Separate Storm Sewer System**.

“Person” means the state or any agency or institution thereof, any municipality, governmental subdivision, public or private corporation, individual, partnership, or other entity, including, but not limited to, association, commission or any interstate body, and includes any officer or governing or managing body of any municipality, governmental subdivision, or public or private corporation, or other entity.

“Physical Alteration” except as used in Part VII.M, means the dredging, filling, draining, or permanent inundating of a **Wetland**. Restoring a degraded **Wetland** by reestablishing its hydrology is not a **Physical Alteration**.

“Rebuttable Presumption” is a presumption that may be rebutted by the evidence.

“Record of Decision” means a record of the comments and the permittee’s response to comments where such record is required in this permit.

“Redevelopment” refers to alterations of a property that change the “footprint” of a site or building in such a way that results in the disturbance of equal to or greater than one (1) acre of land. The term is not intended to include such activities as exterior remodeling, which would not be expected to cause adverse **Storm Water** quality impacts and offer no new opportunity for **Storm Water** controls.

“Reduce” means **Reduce** to the **“Maximum Extent Practicable”** unless otherwise defined in the context in which it is used.

“Regulated MS4” means an **MS4** that is regulated pursuant to 40 CFR § 122.32(a)(1), or an **MS4s** that is designated for coverage by the **Commissioner**.

“Selected MS4” means **MS4s** listed in Part XI (Appendix E).

“Small Municipal Separate Storm Sewer System” means all separate storm sewers that are:

1. Owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, **Storm Water**, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.
2. Not defined as “large” or “medium” **Municipal Separate Storm Sewer Systems** pursuant to 40 CFR §122.26 paragraphs (b)(4) and (b)(7) or designated under paragraph (a)(1)(v).
3. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

“**Small MS4**” means a **Small Municipal Separate Storm Sewer System**.

“**Storm Water**” means **Storm Water** runoff, snowmelt runoff, surface runoff and drainage.

“**Storm Water Pollution Prevention Program**” or “**SWPPP**” is a compilation of **BMPs** to address the six minimum control measures and other provisions of the **MS4** permit, that is designed and managed to **Reduce** the discharge of pollutants from your **MS4** to the **Maximum Extent Practicable** as appropriate to your community.

“**Total Maximum Daily Load**” or “**TMDL**” is the process established by the **USEPA** for the allocation of pollutant loads, including **Storm Water**, to a particular water body or reach of a water body.

“**USEPA**” or “**EPA**” means the U.S. Environmental Protection Agency.

“**Waters of the State**” means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.

“**Wetlands**” are those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. **Wetlands** generally include swamps, marshes, bogs, and similar areas. Constructed **Wetlands** designed for wastewater treatment are not **Waters of the State**. **Wetlands** must have the following attributes:

1. A predominance of hydric soils;
2. Inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and
3. Under normal circumstances support a prevalence of such vegetation.

“You” means the **Owner, Operator** or permittee as appropriate.

PART IX. APPENDIX C: LIMITATIONS ON COVERAGE

Contents of Appendix C:

- A. Discharges to Waters With Prohibited Discharges (pages 25-26)*
- B. Discharges to Waters With Restricted Discharges (pages 26-28)*
- C. Discharges to Trout Waters (page 28)*
- D. Discharges to Wetlands (page 28)*
- E. Discharges Requiring Environmental Review (page 28)*
- F. Discharges Affecting Threatened or Endangered Species or Their Habitat (page 29)*
- G. Discharges Affecting Historic or Archeological Sites (page 29)*
- H. Discharges Affecting Source Water Protection Areas (page 29)*

This part describes more stringent requirements for discharges that meet the following specified criteria, A through H. Whenever two or more requirements, restrictions, or prohibitions apply, both or all must be met. Whenever two or more requirements, restrictions or prohibitions conflict, the more restrictive conditions must be met.

- A. Discharges to Waters with Prohibited Discharges** (*Minn. R. 7050.0180, subp. 3, 4 and 5*). This permit does not authorize **New or Expanded Discharges** to waters, or discharges adversely impacting waters, where the applicable water quality standards prohibit **New or Expanded Discharges** as described in Minn. R. 7050.0180, subp. 3, 4, and 5 unless the following requirements are met:
 - 1. **List.** You must identify as part of your application for permit the Waters with Prohibited Discharges to which your **MS4** discharges. The list must be included with your application, to be submitted within 90 days after the permit effective date on page 1 of this permit or for **Designated MS4s** in accordance with Part IV.B.
 - 2. **Map.** You must mark on U.S.G.S. watershed or topographic maps of 1:24,000 scale or better at minimum the DNR minor subwatersheds in your jurisdiction that discharge in whole or in part to Waters with Prohibited Discharges. You must provide a narrative estimate of the percent impervious surface based on current land use, the percent expected future impervious surface based on zoning or comprehensive plans, and other information that may significantly affect your runoff to the listed waters. The map must be included with your application, to be submitted within 90 days after the permit

effective date on page 1 of this permit or for **Designated MS4s** in accordance with Part IV.B.

3. **Assessment.** You must then assess how your **Storm Water Pollution Prevention Program** can be reasonably modified to eliminate **New or Expanded Discharges** to Waters with Prohibited Discharges. This assessment must be developed for **New or Expanded Discharges** created from 1988 until the year 2020. You must present this assessment, together with your proposed changes to your **Storm Water Pollution Prevention Program**, for public comment during the annual public comment period required in the permit, prior to your first annual report (see Part VI.D) or prior to the schedule in Appendix E for **Selected MS4s**.
4. **Assessment Submittal.** You must submit the assessment from Part IX.A.3 above, including your response to any public comments and proposed changes to your **Storm Water Pollution Prevention Program**, (a) with your first annual report, (b) on another later date if established for your **MS4** by the **Commissioner**, or (c) in accordance with the schedule in Appendix E for **Selected MS4s**. The assessment will be reviewed by the **Commissioner**, who will provide opportunity for public input and hearing prior to denial or approval of your proposed **Storm Water Pollution Prevention Program**. The **MPCA** reserves the right to incorporate as much available information as possible in the decision making process, including the right to independently develop and evaluate potential alternatives to the discharge.
5. **Implementation.** You must implement your approved plan, including all approved **BMPs**, in accordance with the schedule in the approved **Storm Water Pollution Prevention Program**.

B. Discharges to Waters with Restricted Discharges (*Minn. R. 7050.0180, subp. 6, 6a, and 6b*). This permit does not authorize **New or Expanded Discharges** to waters where the applicable water quality standards restrict **New or Expanded Discharges**, unless such discharges are in accordance with Minn. R. 7050.0180, subpart 6, 6a, and 6b, and other applicable rules, and the following requirements. For **MS4s** that have discharges to outstanding resource value waters listed in Minn. R. 7050.0180, subp. 6, 6a or 6b (listed waters, or Waters with Restricted Discharges), the **MPCA** makes a **Rebuttable Presumption** that those **MS4s** have or will create a **New or Expanded Discharge** to a listed water. The following requirements create a schedule to bring discharges to listed waters into compliance:

1. In order to allow a **New or Expanded Discharge** to Waters with Restricted Discharges, the **MPCA** must determine that there are no prudent and feasible alternatives to the **New or Expanded Discharge**. The determination will be based on your demonstration. This demonstration should include, but is not limited to developing a plan to address prudent and feasible alternatives to the discharge. If You intend to argue that there are no prudent and feasible

alternatives to the discharge to these waters, **You** must develop a plan to restrict the discharge to the extent necessary to preserve the existing high quality, or to preserve the wilderness, scientific, recreational, or other special characteristics that make the listed water an outstanding resource value water.

2. Here are the specific actions **You** must take:
 - a. **List.** **You** must identify as part of your application for permit the waters with restricted discharges to which your **MS4** discharges. The list must be included with your application, to be submitted within 90 days after the permit effective date on page 1 of this permit or for **Designated MS4s** in accordance with Part IV.B.
 - b. **Map.** **You** must mark on U.S.G.S. watershed or topographic maps of 1:24,000 scale or better at minimum the DNR minor subwatersheds in your jurisdiction that discharge in whole or in part to waters with restricted discharges. **You** must provide a narrative estimate of the percent impervious surface based on current land use, the percent of future expected impervious surface based on zoning or comprehensive plans, and other information that may significantly affect your runoff to the listed waters. **You** must submit this map with your application within 90 days after the permit effective date on page 1 of this permit or other later date if established by the **Commissioner**.
 - c. **Assessment.** **You** must then assess how your **Storm Water Pollution Prevention Program** can be reasonably altered to eliminate **New or Expanded Discharges** to waters with restricted discharges. This assessment must be developed for **New or Expanded Discharges** produced from 1988 until the year 2020. Where **You** intend to argue that there are no prudent and feasible alternatives to **New or Expanded Discharges** to these waters, **You** must propose measures **You** will implement to restrict the discharge to the extent necessary to preserve the existing high quality, or to preserve the wilderness, scientific, recreational, or other special characteristics that make the listed waters outstanding resource value waters. Measures that can be proposed include ordinances and zoning changes or other **BMPs**. **You** must present this assessment, together with your proposed changes to your **Storm Water Pollution Prevention Program**, for public comment during the annual public comment period required in the permit, prior to your first annual report (see Part VI.D) or prior to the schedule in Appendix E for **Selected MS4s**.
 - d. **Assessment Submittal.** **You** must submit the assessment from Part IX.B.2.c above, and your response to any public comments, with your plan and proposed changes to your **Storm Water Pollution Prevention Program** and submit it with your first annual report, or on another later date if established for your **MS4** by the **Commissioner**, or according to the schedule in Appendix E for **Selected MS4s**. The plan and proposed changes to the **Storm Water Pollution Prevention Program** will be reviewed by the **Commissioner**, who will provide opportunity for public input and hearing pursuant to Minn. R. ch. 7001 prior to denial or approval of your proposed **Storm Water Pollution Prevention**

Program modifications. The **MPCA** reserves the right to incorporate as much available information as possible in the decision making process, including the right to independently develop and evaluate potential prudent and feasible alternatives to the discharge.

- e. **Implementation.** You must implement your approved **Storm Water Pollution Prevention Program**, including all **BMPs** in accordance with the schedule described in the approved **Storm Water Pollution Prevention Program**.

C. Discharges Adversely Impacting Trout Waters (*Minn. R. 6264.0050 subp. 2 and 4*). The following requirements apply to Trout Waters listed in Minn. R. 6264.0050, subp. 2 and 4:

1. This permit does not authorize **New or Expanded Discharges** adversely impacting Trout Waters unless, at minimum, **You** establish administrative procedures or other measures to assure that **You** make the following determinations and document the basis for your decision:
 - a. That there is no feasible and prudent alternative to the proposed discharge; and
 - b. All prudent and feasible measures needed to avoid or **Reduce** impacts to Trout Waters, and to preserve the existing high quality of the water will be implemented (see Part IX.C.2 below).
2. If the discharge cannot be avoided, **You** must consider measures to protect water quality and prevent temperature increases. Acceptable measures include reduce the impervious surfaces, diversion away from the stream and use of filter strips, infiltration, biofiltration, or enhanced grass swales to treat runoff before discharge to the Trout Water. Innovative alternatives to ponds are specifically encouraged for Trout Water discharges if they provide equivalent treatment.

D. Discharges to Wetlands (*Minn. R. 7050.0130, subp. F; also 7050.0186*). This permit does not authorize **Physical Alterations** to **Wetlands**, or other discharge adversely affecting **Wetlands**, if the alteration will have a significant adverse impact to the designated uses of a **Wetland**. Any **Physical Alterations** to **Wetlands** that will cause a potential for a significant adverse impact to a designated use must be implemented in accordance with the avoidance, minimization and mitigation requirements of Minn. R. 7050.0186 and other applicable rules.

E. Discharges Requiring Environmental Review (*Minn. Stat. ch. 116D, and 42 U.S.C. §§ 4321 – 4370 f*). This permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act (Minn. Stat. ch. 116D), the National Environmental Policy Act (42 U.S.C. §§ 4321 – 4370 f), and rules implementing those laws. Any environmental review required of **You** by law, including preparation of environmental review documents such as environmental assessment worksheets, environmental impact statements, or environmental assessments, must be completed in accordance with those requirements.

- F. Discharges Affecting Threatened or Endangered Species.** This permit does not replace or satisfy any review requirements for Threatened or Endangered Species, from discharges whose direct, indirect, interrelated, interconnected, or independent impacts would jeopardize a listed Threatened or Endangered Species or adversely modify a designated critical habitat. For any project resulting in a discharge having the potential to adversely impact Threatened or Endangered species, or their critical habitat, **You** must conduct your required review and coordination with appropriate agencies in accordance with those requirements.
- G. Discharges Affecting Historic or Archeological Sites.** This permit does not replace or satisfy any review requirements for Historic or Archeological Sites from discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or adversely affecting known or discovered archeological sites. For any project resulting in a discharge having the potential to adversely impact Historic or Archeological Sites, including significant anthropological sites and any burial sites, **You** must conduct your required review and coordination with the Minnesota State Historic Preservation Officer or other appropriate agencies in accordance with those requirements.
- H. Discharges Affecting Source Water Protection Areas** (*Minn. R. 4720.5100 – 4720.5590*). **You** shall incorporate **BMPs** into your **Storm Water Pollution Prevention Program** to protect any of the following drinking water sources that your **MS4** discharge may affect, and **You** shall include the map of these sources with the **Storm Water Pollution Prevention Program** if they have been mapped:
1. Wells and source waters for drinking water supply management areas identified as vulnerable under Minn. R. 4720.5205, 4720.5210, and 4720.5330, and
 2. Source water protection areas for surface intakes identified in the source water assessments conducted by or for the Minnesota Department of Health under the federal Safe Drinking Water Act, U.S.C. §§ 300j – 13.

PART X. APPENDIX D: NONDEGRADATION FOR SELECTED MS4s

The requirements of this section apply only to **MS4s** called **Selected MS4s** as described in Part XI (Appendix E). Certain **MS4s** have been selected to perform the requirements of this part because their size and growth may be closely correlated with increased **Storm Water** flows and pollutant loading. Nondegradation review applies to all significant **New or Expanded Discharges** to all waters but does not negate the applicable requirements for outstanding resource value waters, requirements for special classes of waters, other requirements in Appendix C or the general requirements of the permit.

A. Selected MS4s

The basic requirement for all **MS4s** regulated under this permit is to develop a **Storm Water Pollution Prevention Program** that meets the requirements of the permit. An additional process is required of a limited number of permittees (30) that are listed in Appendix E. These **Selected MS4s** must submit to the **Commissioner** information described below to determine whether additional control measures beyond those of the permit Parts I through IX can be reasonably taken to minimize the impacts of the discharges. Selection, for purposes of this permit, is described in Appendix E.

B. Loading Assessment

Each **Selected MS4** must assess the change in **Storm Water** discharge loading for its permitted area using a pollutant loading water quality model that, at minimum, addresses changes in Average Annual Flow Volume, Total Suspended Solids, and Phosphorus. This modeling will be based on two time periods: from 1988 (1988-1990) to the present (2000-2005), and from the present to 2020. The **Selected MS4s** must use a simple model, or another more complex model that they find to be more appropriate, that addresses the parameters of concern. This may include a model that the **Selected MS4** has already used. Other assessment methods may be used if they can be shown to be as effective at quantifying the increase in loading as the modeling methods. The models and/or other methods will be used as part of the assessment to develop the Nondegradation Report, to help in selecting appropriate **BMPs** that address nondegradation, to determine whether additional control measures can reasonably be taken to **Reduce** pollutant loading, and for a few **Selected MS4s** that elect to do so, to evaluate the significance of the **New or Expanded Discharge**.

C. Nondegradation Report

Selected MS4s that have significant **New or Expanded Discharges** are required to complete a Nondegradation Report and, upon approval, to incorporate its findings on **BMPs** that address nondegradation into their **Storm Water Pollution Prevention Program**. The **BMPs** shall address changes in pollutant loadings as far as is reasonable and practical through future development. Additionally, the **BMPs** shall address, as far as is reasonable and practical, the negative impacts of increased **Storm Water** discharge volumes that cause increased depth and duration of inundation of **Wetlands** having the potential for a significant adverse impact to a designated use of the **Wetland**, or changes in stream morphology that have the potential for a significant adverse impact to a designated use of the streams.

The Nondegradation Report must include consideration of the Loading Assessment, which must include analysis of flow and may include removal of pollutants by **BMPs** already initiated. For purposes of this **General Permit**, 1988 levels consistently attained means runoff that would have been produced under approximately average conditions of rainfall. Local **Storm Water** management plans and other pertinent factors may also be considered. **BMPs** implemented by other parties may be considered when those **BMPs** affect the **Storm Water** from the area of the **Selected MS4**. If the pollutant loadings cannot be **Reduced** to levels consistently attained in 1988, the Report must describe reasonable and practical **BMPs** that the **Selected MS4** plans to incorporate into a modified **Storm Water Pollution Prevention Program**. The **Selected MS4** must consider alternatives, explain which alternatives have been studied but rejected and why, and propose alternatives that are reasonable and practical. The Report must give high priority to **BMPs** that address impacts of future growth, such as ordinances for **New Development**. Where increases in pollutant loading have already occurred due to past development, the Report must consider retrofit and mitigation options (**BMPs**) that the **Selected MS4** determines to be reasonable, practical and appropriate for the community. The **Selected MS4** is responsible for developing any site specific cost/benefit, social, and environmental information that the **Selected MS4** wishes to bring to the **Agency's** attention. The **Selected MS4** must incorporate the **BMPs** into a modified **Storm Water Pollution Prevention Program** and include an implementation schedule that addresses **New Development** and retrofit **BMPs** it proposes to implement.

D. Public Participation

Prior to submittal to the **MPCA**, the proposed **Storm Water Pollution Prevention Program** modifications to address nondegradation will be public noticed at the local level as required in the permit (Part V.G.1.e). Each **Selected MS4** shall also submit its **Storm Water Pollution Prevention Program** modifications to address nondegradation to the appropriate local water authority (e.g. watershed organizations or county water planning authority) in time to allow for their review and comment. The Nondegradation Report explaining the proposed **BMPs** and the entire **Storm Water Pollution Prevention Program** must be made available to the public and local water authority upon request.

E. Submittals for Selected MS4s

Selected MS4s must submit their proposed changes to the **Storm Water Pollution Prevention Program**, reports addressing nondegradation for all waters (and restricted waters or prohibited waters if applicable), together with other supporting documents, to the **MPCA** in accordance with the schedule in Appendix E. This submittal must include:

1. The Loading Assessment;
2. The Nondegradation Report;
3. The proposed **Storm Water Pollution Prevention Program** modifications to address nondegradation;
4. The public and local water authority comments on the proposed **Storm Water Pollution Prevention Program** modifications to address nondegradation, with a **Record of Decision** on the comments; and

5. An application to modify the permit.

F. MPCA Review

The **MPCA** will review the above submittals in accordance with Minn. R. ch. 7001. After consideration of the Loading Assessment, the Nondegradation Report, public and local water authority comments, the **Record of Decision** by the **Selected MS4**, and other pertinent information, the **MPCA** will make a determination on the preliminary approval of the proposed **Storm Water Pollution Prevention Program**. The role of the **MPCA** during the review process will generally be limited to reviewing the information presented by the **Selected MS4** and comments made by others during the review process. However, the **MPCA** reserves the right to incorporate as much available information as possible in the decision making process, including the right to independently develop and evaluate potential reasonable and practical alternatives.

G. Notice and Preliminary Determination

The **MPCA** will provide statewide public notice and opportunity for hearing on any **MPCA** determination of intent to deny or approve the **Storm Water Pollution Prevention Program** modifications to be implemented under this permit. The **MPCA** will provide public and **MPCA** comments to the **Selected MS4**. The **Selected MS4** will have the opportunity to respond to the comments prior to the **MPCA** making a final determination.

H. Final Determination

The **Commissioner** will make a final determination on the modifications to the **Storm Water Pollution Prevention Program** in accordance with Minn. R. ch. 7001.

I. Implementation of the Approved Storm Water Pollution Prevention Program

Following approval by the **MPCA** (as described in Part X.H above), the approved **Storm Water Pollution Prevention Program** modifications, including any changes required by the **MPCA**, must be implemented by the **Selected MS4** in accordance with the schedule in the approved **Storm Water Pollution Prevention Program** and modifications.

PART XI. APPENDIX E: SELECTED MS4s

This part describes the schedule of submittals of the items listed in Part X (Appendix D), item E to the **MPCA** for review and approval. The **Commissioner** has selected the **MS4s** listed below for further nondegradation review. The selection was based on the population growth experienced by the community during three time periods: from 1990 to 2000, based on census data; from 2000 to 2003, based on projections by the State Demographer and Metropolitan Council; and from 2000 to 2020, also based on the State Demographer and Metropolitan Council projections. The **Commissioner** also considered the size of the community as represented by the 2000 census. The **Commissioner** may also determine that additional **MS4s** be selected based on the same factors, or other factors in accordance with Minn. R. ch. 7001 and other applicable rules.

The following **Selected MS4s** shall submit the items listed in Part X (Appendix D), item E, to the **MPCA** for review and approval, postmarked on or before the listed dates.

	Selected MS4	Submittal date
1	Rochester	15 months after the effective date of the Permit
2	Woodbury	15 months after the effective date of the Permit
3	Maple Grove	15 months after the effective date of the Permit
4	Lakeville	15 months after the effective date of the Permit
5	Eden Prairie	15 months after the effective date of the Permit
6	Eagan	16 months after the effective date of the Permit
7	Plymouth	16 months after the effective date of the Permit
8	Blaine	16 months after the effective date of the Permit
9	Bloomington	16 months after the effective date of the Permit
10	Duluth	16 months after the effective date of the Permit
11	Brooklyn Park	17 months after the effective date of the Permit
12	Shakopee	17 months after the effective date of the Permit
13	Apple Valley	17 months after the effective date of the Permit
14	St. Cloud	17 months after the effective date of the Permit
15	Burnsville	17 months after the effective date of the Permit
16	Prior Lake	18 months after the effective date of the Permit
17	Maplewood	18 months after the effective date of the Permit
18	Coon Rapids	18 months after the effective date of the Permit
19	Andover	18 months after the effective date of the Permit
20	Elk River	18 months after the effective date of the Permit
21	Savage	19 months after the effective date of the Permit
22	Farmington	19 months after the effective date of the Permit
23	St. Louis Park	19 months after the effective date of the Permit
24	Edina	19 months after the effective date of the Permit
25	Minnetonka	19 months after the effective date of the Permit
26	Chanhassen	20 months after the effective date of the Permit
27	Chaska	20 months after the effective date of the Permit
28	Inver Grove Heights	20 months after the effective date of the Permit
29	Rosemount	20 months after the effective date of the Permit
30	Cottage Grove	20 months after the effective date of the Permit